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The central design of the Union's official seal is the American Goldfinch, designated State Bird of Iowa in 1933.

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The First Iowa Foray

DEAN M. ROOSA
State Preserves Board
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DES MOINES

The term 'foray' has been used to describe an intensive, short-term team study of a localized area. Because the concept was developed by ornithologists, the emphasis has historically been on birds with increased importance recently being placed on total ecological reconnaissance. Tennessee, Virginia and West Virginia have been leaders in the foray concept, starting as early as 1939 (Bell, *The Redstart* 43 p. 11, 1976). Some states have progressed to a point where an entire county is studied.

Peter C. Petersen, editor of *Iowa Bird Life*, made two presentations at meetings of the Iowa Academy of Science and published one article (IBL 41 p. 77-8, 1971), promoting the foray idea in Iowa. The response was low, with the fuel shortage a contributing factor and the topic was not further pursued. During the 1977 Iowa Ornithologists' Union banquet, Ross Silcock, Jon Stravers and I discussed the possibility of a foray and decided to conduct such an event, even if only the three of us would be free to participate. Response was good as 15 persons participated.

The foray, jointly sponsored by the State Preserves Advisory Board and the Iowa Ornithologists' Union, was conducted June 3-7, 1977, a period which included a weekend and a portion of a week to provide maximum opportunity for participation. The study area was basically Washington Township in Fremont County, the farthest southwest county in Iowa, with the addition of Riverton Wildlife Area and an extension west to the Missouri River (Fig. 2). Washington Township is bounded on the north by Hwy. 2, on the south by the Iowa-Missouri border, on the east by the Nishnabotna River and on the west by the Missouri River. This area contains a sizeable state park which offers a protected habitat for future comparative studies and is one of the areas in Iowa where little is known of the biota. Biogeographical phenomena can be seen operating in this part of Iowa. The barrier effect of the Missouri River, restricting certain mammals from entering Iowa, and the northern and southern influence on animal populations are both apparent. The township includes a variety of habitats including steep loess hills, alluvial bottoms which include woods and drainage ditches, wooded ravines, cropland, roadside ditches and a marsh. It is also habitat for several bird species either rare or thought to be declining; these are the Blue Grosbeak (*Guiraca caerulea*), Summer Tanager (*Piranga rubra*), Cerulean Warbler (*Dendroica cerulea*) and Bell's Vireo (*Vireo bellii*).

Forays of this nature should help to fill gaps in the knowledge of Iowa's natural history. As aptly pointed in the articles by Bowles and Downey, some fundamental knowledge is lacking for even the common species in the study area and presumably is true for the entire state. Basic studies on our remaining natural areas are needed and articles such as those help put into perspective this study and others to follow.

Following this brief introduction are articles on the various facets of the foray including an annotated bird list, singing male counts, breeding bird route results, mammal studies, butterfly studies, a county vascular plant list and lists of bryophytes and lichens. Because the available space is limited, some articles will appear in the March issue.

List of Participants

David Bowles, Pella	James Peck, Ames
John Bowles, Pella	Ruth Phipps, Shenandoah
John Downey, Cedar Falls	Dean M. Roosa, Des Moines
Dennis Dunlap, Ames	Ross Silcock, Malvern
Steve Duecker, Danbury	Marie Spears, Shenandoah
Larry Eilers, Cedar Falls	Jon Stravers, Pella
Ione Getscher, Hamburg	Betty Walters, Shenandoah
Carol Peck, Ames	

Future Iowa Forays

Because the biota of the periphery of the state is poorly known, we decided to conduct forays in the corner counties first. After this initial study in Fremont County, we plan on the following sequence: Allamakee Co., 1978; Lee Co., 1979 and Lyon Co., 1980.

Allamakee County - 1978. Dates: June 2-7. Because of the significant number of unusual breeding records from the Yellow River State Forest, one of the townships including a portion of this forest has been accepted as a minimum area. We will expand the study area to include more townships and possibly the entire county if enough participants voice interest. In addition to the disciplines represented in 1977, it is hoped we can add a herpetologist, another mammologist, an ichthyologist, another botanist, a general ecologist and a geologist.

If you are interested, please let me know well in advance so appropriate routes and study areas can be delineated.

The Nature of the Loess

The wind-deposited material which forms the steep hills of western Iowa, and are especially prominent in Waubonsie State Park, blankets much of the state and is termed 'loess'. This was deposited over a several thousand year period, starting about 29,000 years ago (Ruhe, 1969). The average thickness of this material is about 60 ft., but the western margin adjacent to the Missouri River floodplain has thicknesses exceeding 150 ft. Erosion of this fine-grained material accounts for the steepness of the slopes, the intricate pattern of the landscape and the relief of the area.

The loess hills are perhaps the most unique habitat in the state and, along with an area in China, represent the most spectacular loess deposition in the world. On these dry west-facing steep slopes are found numerous species of plants normally found in the Great Plains of the western United States. Because Iowa has this unique landform and Iowans are stewards of our heritage, we should attempt to preserve a large tract of these hills intact for the enjoyment by future generations.

Also associated with this landform is a vast floodplain and terraces. The Missouri River, however, has been so modified in the past few decades by straightening, diking and other flood control measures that much of its natural character is gone.

Vegetation Changes in Waubonsie State Park

Since settlement and cessation of prairie fires, woody vegetation has been encroaching on the prairies of the loess hills. This is easily evidenced in Waubonsie State Park presently as Smooth Sumac (*Rhus glabra*) and Gray Dogwood (*Cornus drummondii*) are now found in dense growths at the prairie remnant edges and prairie plants are still found interspersed in the woodlands.

The oldest extant aerial photographs of Waubonsie State Park are from 1938. Periodically, aerial photographs have been taken in the intervening years up to present. Copies of the 1938, 1955 and 1976 photographs were obtained and prairie



Fig. 1. Aerial photograph of Waubesa State Park, Fremont County, Iowa, taken in 1955. North is to the right. The prairie remnants mentioned in the text are on the North-South ridge slightly above center.

openings were measured by the use of a finely divided grid, each square representing one-tenth acre. Fig 1 shows an aerial view of Waubonsie Park in 1955. It appears that during the time period 1938-1955 about 17.8 percent of the hill prairie were lost; from 1955 to 1976, 19.6 percent of the prairie remnants were invaded by woody vegetation. This represents a loss of approximately one percent per year. The above figures may not be highly accurate because the scale of the aerials was small and they were not taken at the same month of the year or hour of the day. It does show that if management, such as a controlled burn program is not initiated, we will lose these loess prairies in southwest Iowa.

Climatological Data

Each day of the foray was clear with high Cirrus clouds present at dawn on June 4th and 5th. Scattered Cumulus clouds were present on June 4th.

Sidney, approximately five miles north and the closest weather station, recorded the following temperatures:

	June 3		June 4		June 5		June 6		June 7	
	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
Maximum	85	(29.5)	99	(37.2)	100	(37.5)	98	(36.5)	85	(29.5)
Minimum	61	(16)	72	(22.2)	75	(24)	64	(17.5)	56	(13.3)

The average maximum temperature for June at Sidney was 88.8 degrees F (31.5 degrees C), the average minimum temperature was 64.9 degrees F (19.2 degrees C) and the average temperature was 76.4 degrees F (24.5 degrees C).

No rain fell during the foray. At Sidney, during the period May 21 - June 12, .72 inches (1.82 cm.) of rain fell. On June 12, this station received 2.79 inches (7.08 cm.) of rain. The total precipitation for June was 4.99 inches (12.67 cm.).

The air was normally calm at dawn, with movement of 7-13 mph occurring by mid-morning. Strong winds, accompanied by a sharp decline in temperature occurred during the early morning hours of June 7. These winds, the velocity of which is unavailable, were strong enough to nearly blow down tents. It was a welcome change, however, from the stifling weather preceding.

Records from the Foray

The more significant records are here summarized; see the body of the text for details.

Plants

Oenothera speciosa. A naturalized species in Iowa, it has been reported in Iowa two times previously and not since 1954. It was blooming in profusion along roadsides in the southern part of the township.

Jussiaea repens. Floating Primrose Willow. This plant was known previously in Iowa only from Red Haw Lake in Lucas County. It was found in great abundance on the muddy shores of the Riverton Wildlife Area.

Bryophytes

Nineteen new county records, including two state records were recorded during the foray.

Mammals

Woodland (Pine) Vole (*Microtus pinetorum*). This rodent, now very rare in Iowa, was found on the steep loess and was known previously from this county. It is now listed as 'endangered' on Iowa's Endangered Species List (Roosa, 1977).

Meadow Vole. (*Microtus pennsylvanicus*). This represents a new county record; individuals were taken from a marshy habitat near Riverton.

Keen's Myotis. (*Myotis keenii*). Capture of this bat represents a new county record; this rare species is now included as 'threatened' on Iowa's Endangered and Threatened Species List (Roosa, 1977).

Butterflies

Eight new county records were established during the foray; none were unexpected.

Birds

Double-crested Cormorant. An adult and an immature bird were seen at the Riverton Wildlife Area.

Swallows. All six of the Iowa resident swallows were recorded as nesting in Washington Township during the foray.

Black-and-white Warbler. A singing male was seen on two occasions.

Worm-eating Warbler. A singing male was heard and seen in Waubonsie State Park.

Louisiana Waterthrush. Small population of breeding birds were found at Waubonsie State Park. Bowles netted and banded a young bird.

Kentucky Warbler. A singing male was found at Waubonsie State Park.

Blue Grosbeak. Ten individuals were observed; one was carrying nesting material.

Literature Cited

Roosa, Dean M. 1977. *Endangered Iowa Mammals*. Special Report of the Preserves Board. No. 2. 24 pgs. Des Moines, Iowa.

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Annotated List of Foray Birds

W. ROSS SILCOCK
MALVERN

Introduction

It is the intention of this annotated list to provide an information base regarding the summer birds of Washington Township in particular and Fremont County in general. It is hoped that further information will become available in later forays to add to that contained herein. No attempt is made in this list to decide authenticity of observations, but they are presented in the context of other information available in the literature in order to give some idea of the true status of the species in question in the area.

Sources of Information

1. Four breeding bird survey routes were set up to cover the range of habitats in the township. These were modeled after those of the Fish and Wildlife Service of the federal government. As well as Washington Township, these routes included a portion of extreme southern Benton Township and the western edge of the Riverton Game Management Area (Fig. 1). Observers were: Route A, Ross Silcock; Routes B and C, Dean Roosa; Route D, Jon Stravers.

2. Singing male counts were made at Riverton and within Waubonsie State Park, and, while pertinent information from these is included here, these counts will be summarized elsewhere. Observers participating were: David Bowles, John Bowles, Ione Getscher, Jim Peck, Ruth Phipps, Dean Roosa, Ross Silcock, Marie Spears, Jon Stravers and Betty Walters.

3. A special check of a seven-mile stretch of the Main Drainage Ditch was made for Bell's Vireo. Several other species of interest were located here also, and information on these is included herein, although this study will be summarized elsewhere.

4. Mrs. Ione Getscher, who lives near Hamburg in Washington Township, contributed notes on birds seen during the foray period, as well as some information on certain previous sightings in the area.

5. Information from the literature is also included to give a more complete picture of the status of summer birds of the area.

Terms of Occurrence

Relative abundance is described in a comparative manner as indicated by the count data. Numbers in parentheses refer to the breeding bird survey data and are given in this order: Route A, B, C and D, moving from east to west as shown in Fig. 1. The habitat types represented are upland farmland, wooded loess bluffs, and Missouri River bottomland, again moving from east to west. Route A data includes the western edge of Riverton Game Management Area, which is generally wooded.

Summer status is given as "breeding bird" when breeding is proven or virtually certain, or as "summer resident" or "summer visitant", "resident" suggesting breeding where such is not proven, with "visitant" implying non-breeding status.

An asterisk beside a species name indicates that while that species was not recorded during the foray, it has been recorded in or near the area in summer.

Abbreviations Used

AB -- American Birds. National Audubon Society.

AOU 5th -- Checklist of North American Birds. Fifth Edition. American Ornithologists' Union, 1957.

CBC -- Christmas Bird Count.

GMA -- Game Management Area.

IBL -- Iowa Bird Life. Iowa Ornithologists' Union.

NBR -- Nebraska Bird Review. Nebraska Ornithologists' Union.

NWR -- National Wildlife Refuge.

SP -- State Park.

Authors Mentioned in Text

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Green and Janssen -- Green, Janet C. and Robert B. Janssen. 1975. *Minnesota Birds: Where, When, and How Many*. University of Minnesota Press.

Johnston -- Johnston, Richard F. 1965. *A Directory to the Birds of Kansas*. University of Kansas Museum of Natural History, Miscellaneous Publication No. 41.

Rapp -- Rapp, William F. Jr., Janet L. C. Rapp, Henry E. Baumgarten, and R. Allyn Moser. 1971. *Revised Checklist of Nebraska Birds (with Supplement through 1970)*. Occasional Papers of the Nebraska Ornithologists' Union, No. 5A.

National Wildlife Refuge and Other Checklists Used

De Soto NWR -- 1968.

Fontenelle Forest and Environs -- LeDioyt, Glenn H., and R. G. Cortelyou. Undated Fontenelle Forest Nature Center

Squaw Creek NWR -- 1966 and 1975.

Annotated List

Double-crested Cormorant (0,0,0,0). Two were seen at Riverton June 6, one an adult and the other an immature, presumably a one-year-old bird. These birds were with Great Blue Herons perched in a stand of dead cottonwoods, but as yet no evidence is available for breeding of either species in the area. A single bird was reported at Riverton August 15, 1976 by Braley (IBL 46:82), and a number were seen at Forney Lake June 13-19, 1974, reported by Phipps (IBL 44:71), these being considered "unusual since there was no breeding colony". Forney Lake is about 15 miles from Riverton, well within the feeding range for this species. Cormorants are common spring migrants through the Riverton area, up to 150 being recorded at one time (AB 30:847).

Great Blue Heron (0,0,0,0). Several were seen at Riverton (see above), five with the cormorants. Breeding is presumptive in the area as large numbers are seen at Riverton each summer, but is not yet proven. There seems to be no shortage of suitable habitat.

Green Heron (2,0,0,0). Fairly common summer resident.

Least Bittern (0,0,0,0). Several were heard at dusk in cattails at Riverton June 6. Apparently common when suitable habitat is available.

Mallard (0,0,0,2). Probably breeds in small numbers at Riverton, along drainage ditches, and on farm ponds.

Blue-winged Teal (0,1,0,0). Also probably breeds in small numbers at Riverton and on farm ponds.

Northern Shoveler (1,0,0,0). A female seen flying towards Riverton by Silcock was probably a non-breeding straggler, although southwest Iowa is near the southeast edge of the breeding range. Easterla considers it a casual summer visitor in Missouri.

Wood Duck (1,0,0,0). Common breeding bird in wooded riparian areas.

Turkey Vulture (0,0,0,0). Fairly common summer resident, but breeding not proven. There is a roost east of Waubonsie S.P. near the Nishnabotna River, probably the source of the 17 birds seen over the park by Roosa June 4.

Red-tailed Hawk (0,0,1,0). Fairly common summer resident.

American Kestrel (0,0,0,0). Fairly common breeding bird.

Common Bobwhite (52,13,9,15). Very common breeding bird, especially in upland areas.

Ring-necked Pheasant (34,26,22,5). Very common breeding bird throughout.

* **Wild Turkey**. Reported several times in the loess bluffs area since liberation northeast of Waubonsie S.P. Some sightings may be of birds moving north from Missouri (see NBR 45:6).

* **American Coot**. Not found at Riverton, but a pair was seen on a small pond at Pinky's Glen in northern Fremont County June 3, and a young bird was seen there July 7 (Silcock). Two were also seen at Taylor Lake in northern Fremont County June 20, by Silcock and Marsh. Probably breeds in small numbers at Riverton also.

Killdeer (3,3,0,2). Fairly common breeding bird.

Spotted Sandpiper (0,0,0,0). Two were seen by Roosa June 3 at Riverton in suitable breeding habitat. Would be expected to breed in the area.

Rock Dove (1,3,7,0). Fairly common breeding bird.

Mourning Dove (68,29,33,14). Very common breeding bird.

Yellow-billed Cuckoo (4,5,0,1). Common breeding bird.

Black-billed Cuckoo (1,5,2,0). Common breeding bird.

* **Common Screech Owl**. May be becoming scarce in area due to the abundance of Great Horned Owls (see IBL 47:19).

Great Horned Owl (7,1,0,1). Common breeding bird, probably more correctly considered abundant for a large raptor.

Barred Owl (0,0,0,0). Two were flushed along the main drainage ditch during a search for Bell's Vireo June 6. Both were seen again in the same place July 7. Fairly common breeding bird in the area, especially at Riverton and along the Nishnabotna River.

* **Short-eared Owl**. Getscher reported one June 22, 1974. Brown considers it a rare permanent resident in Iowa and it is listed as rare in summer at Squaw Creek NWR but with no breeding evidence. Non-breeders may summer south of the generally recognized breeding range.

* **Chuck-will's-widow**. Special effort was made to locate this species, but none were heard. It apparently is regular in extreme southeastern Nebraska (Indian Cave SP - see NBR 35:50 and 37:59), and has been reported in Mills County, Iowa (NBR 40:85).

Whip-poor-will (0,0,0,1). Fairly common breeding bird in wooded areas along the loess bluffs.

Common Nighthawk (0,0,0,0). Reported by Getscher during foray. Hamburg is the only large residential area in Washington Township and it would be expected there.

Chimney Swift (1,0,0,0). Common breeding bird in residential areas, and in house chimneys in rural areas.

* **Ruby-throated Hummingbird** (0,0,0,0). This bird was not reported during foray, and is hard to find at any given time. Probably an uncommon breeding bird however. Getscher reported that it nested near her home for two years.

Belted Kingfisher (0,0,0,0). Also rather unpredictable, but Stravers saw one along one of the drainage ditches. Probably an uncommon summer resident.

Common Flicker (1,6,1,1). Fairly common breeding bird. All resident birds are "Yellow-shafted".

Red-bellied Woodpecker (5,0,0,0). Common breeding bird in more extensive woods. One was seen entering a nest hole within which young could be heard at Waubonsie SP June 7.

Red-headed Woodpecker (19,11,6,3). Very common breeding bird in wooded areas, especially in somewhat more open areas than the Red-bellied Woodpecker.

Hairy Woodpecker (0,1,0,0). Fairly common breeding bird in deeper woods.

Downy Woodpecker (1,1,0,1). Common breeding bird in open woods and scrub areas. Generally absent from deeper woods where the Hairy Woodpecker is present.

Eastern Kingbird (4,14,4,4). Very common breeding bird.

* **Western Kingbird**. Despite careful search, not found in Washington Township during foray. However, Getscher has recorded it near her home in past years, and Silcock found four in a 15-mile stretch of roads in Benton Township, just to the north and west of Washington Township on July 7. It is generally found on lines near homesteads in rural areas, and Washington Township does not have many of these.

Great Crested Flycatcher (8,10,0,0). Common breeding bird in extensive wooded areas.

Eastern Phoebe (0,0,0,0). Present in small numbers, but a fairly common breeding bird. One was heard singing in the picnic area at Waubonsie SP near an apparently destroyed nest, and another was seen near a small bridge across a drainage ditch.

* **Say's Phoebe**. While this species is ordinarily considered to be restricted to northwest Iowa (Brown), Getscher reported one May 16, 1972 (IBL 42:39),

probably a migrant. It apparently bred regularly in northwest Iowa from at least 1960 for about 10 years (IBL 39:74), but not in 1973 (IBL 43:75). During the same period it apparently nested in Lancaster County, Nebraska in 1966 (NBR 35:11) and near West Point, Nebraska in 1970 (NBR 38:91). It was found nesting in Plymouth County in 1977 by Darwin Koenig and Joe Schaufenbuel (personal communication, 1977). Bryant (IBL 47:110) saw a single adult in Plymouth County in 1977. These records for the 1960s may indicate an eastern extension of the breeding range during the 1950s, a dry decade, and subsequent contraction in the 1960s. Whether its range will again expand into western Iowa in the late 1970s is yet to be seen. At present it breeds regularly in Nebraska as far east as Adams County (see NBR).

***Acadian Flycatcher.** This bird was not heard during toray and was almost certainly absent as its call is very distinctive. However, Silcock, Marsh and Getscher heard several at Waubonsie SP June 21, suggesting that it is a late arrival in this area. Nests have been found at the park by DeLong June 19, 1959 and May 23, 1964 (pers. comm. to Silcock), but it seems to be rather irregular in the area. It is possible that when the population is high for the species, birds unable to find territories in more southerly areas move farther north, resulting in late arrivals in more northerly parts of the breeding range. In the last 10 years at Fontenelle Forest it has been reported as a summer resident five years (1969, 70, 72, 73, 74), a spring and fall migrant four years, and was unreported in 1968.

Willow Flycatcher (0,3,1,0). Common summer resident in suitable habitat.

Alder Flycatcher (0,0,0,0). Several were singing along the Main Drainage Ditch June 4 and 6, but could not be found July 7. Presumably these birds were migrants.

Eastern Pewee (3,2,0,0). Common breeding bird in extensive woods.

Olive-sided Flycatcher (0,0,0,0). One was seen by Silcock, Roosa, and Peck June 3 near the Missouri River in extreme southwest Washington Township, presumably a migrant. Brown gives June 12 as the late spring date for this species in Iowa.

Horned Lark (0,1,3,0). Fairly common breeding bird. Usually seen along roadsides.

Tree Swallow (0,0,0,0). This species was found to be common at Riverton GMA, where an active nest hole was found by Phipps, Spears, and Walters June 5. On June 6 three other occupied nest holes were found by D. Bowles, Stravers, and Silcock, using a canoe. Some 15-20 adults were seen in the area. Brown notes that "published nesting records range from Des Moines northward" and considers it an uncommon breeding bird in Iowa. Thus this appears to be the farthest south nesting recorded in Iowa, although Rapp states that the Tree Swallow is an "uncommon to rare breeder in the Missouri River Valley Region" in Nebraska, and occurrence reports in NBR list it as a summer resident in Douglas-Sarpy Counties. At De Soto NWR it is listed as an uncommon breeder, and at Squaw Creek NWR it is considered a common summer resident and breeder. Furthermore, Johnston lists it as a summer resident in extreme northeast Kansas. Hence it appears that this species breeds southeastward in the Missouri River Valley some 60 miles from Iowa.

Bank Swallow (0,0,0,7). A colony was found in a sandpit in southern Benton Township one mile west of Washington Township by Stravers. There appeared to be about 45 nest holes, many of them active. It was also reported by Getscher, and probably breeds in suitable banks in the loess bluffs.

Rough-winged Swallow (0,7,1,0). Fairly common breeding bird, usually in small colonies.

Barn Swallow (19,22,8,5). Abundant breeding bird.

Cliff Swallow (0,0,1,0). What was once a large colony of about 75 nests was found on the supports of an I-29 overpass near Payne Junction in Washington Township. However, only about 5-10 of the nests were occupied by Cliff Swallows, many of the others being used by House Sparrows and many unoccupied.

Purple Martin (0,0,0,0). Reported by Getscher. Usually present where houses are provided.

Blue Jay (13,18,4,4). Common breeding bird.

Common Crow (5,1,0,0). Fairly common, and presumably breeds, but not always easy to locate in summer.

Black-capped Chickadee (0,2,0,5). Fairly common breeding bird. Probably not as ubiquitous in this part of Iowa as it is in the east.

• **Carolina Chickadee**. Care was taken to listen for the four-noted song of this species but without success. It has been reported in Fontanelle Forest (IBL 45:49, 88 and 46:54; NBR 37:52, 38:63, and 42:57) and apparently banded in Iowa; the 1974 Bird Banding Summary in IBL lists 3 Carolina Chickadees, but these were banded by Diggs and Diggs "at home" in Missouri (IBL 45:88). However, in 1975 and 1976 the Summary listed 6 and 5 Carolina Chickadees respectively, but no further details were provided. The nearest accepted breeding area for this species is central Missouri and extreme southeast Kansas, although the possibility of intergrades or strays does exist. There are two accidental records of this species for Iowa, in Buchanan and Lee Counties (see AOU 5th).

Tufted Titmouse (4,9,0,2). Common breeding bird in extensively wooded areas, but scarce elsewhere.

White-breasted Nuthatch (0,0,0,1). Fairly common breeding bird in wooded areas.

House Wren (15,24,3,6). Abundant breeding bird in woods, common elsewhere. This is the most common bird at Waubonsie SP, even in the deep woods.

Carolina Wren (0,0,0,0). Reported only by Getscher. Numbers may have been reduced during the cold previous winter, although it is generally rather uncommon in this area. It is considered a summer resident in Douglas-Sarpy Counties, as reported in NBR.

Sedge Wren (0,0,0,0). Several were heard singing June 5 in a weedy area at the Riverton GMA by Silcock. The weeds had grown in an area usually under standing water.

• **Northern Mockingbird**. None were found in Hamburg despite a search June 5. Getscher reported it as nesting one year in her yard. It is an irregular visitor in this area, likely at any season, being considered occasional in summer at both Fontanelle Forest and environs and Squaw Creek NWR. This species is more common in south-central Iowa, especially near Lamoni (see CBC data in IBL).

Gray Catbird (3,8,9,2). Common breeding bird.

Brown Thrasher (4,5,5,5). Common breeding bird.

American Robin (38,13,13,11). Abundant breeding bird.

Wood Thrush (0,4,0,0). Found almost exclusively in deep woods at Waubonsie SP, but was also heard in riparian woods along the Missouri River by Peck, Roosa and Silcock.

• **Eastern Bluebird**. This species is very difficult to locate in summer in this area, and at best could be considered an uncommon breeding bird. None were reported during foray.

• **Blue-gray Gnatcatcher**. -- A special search was made at Waubonsie SP for this species, but none were found. A later check on June 21 was also unsuccessful. In 1971 Brown considered it an uncommon breeding bird in Iowa, but that it was extending its range northward. Since then, however, it may have decreased in numbers in this area. The most recent Squaw Creek NWR checklist (1975) lists it

as uncommon, whereas the previous list (1966) listed it as common. It is also listed as uncommon at Fontenelle Forest, although NBR does not give any summer records for the last 10 years except for a single record of breeding in Lancaster County (NBR 43:23). In Gage County, Fiala states that it "has, or probably has, nested here, but not regularly" (NBR 38:57), and cites a breeding record at Barnston (NBR 38:57). The published reports for southwest Iowa in the same period are similarly scarce. There are only two: in 1974 Phipps stated that "none were seen" (IBL 44:74), but in 1975 the same observer considered them "numerous" in Waubonsie SP on July 11 (IBL 45:94). Thus it appears that this species is rather irregular as a breeding bird in this area.

Cedar Waxwing (0,0,0,0). Two sightings of this species were reported: it was seen by Getscher, and four were seen by Silcock along the Main Drainage Ditch just north of Hamburg. These were probably migrants, as this species is a late breeder. However, mulberries are abundant in the area, and it has bred at Squaw Creek NWR.

• **Loggerhead Shrike**. While it was not reported during the foray, it nests in small numbers in Fremont County. Silcock saw one in extreme northwest Washington Township on July 7.

European Starling (3,6,5,6). Common breeding bird, in pleasantly low numbers compared with the hordes of migrants and wintering birds.

• **White-eyed Vireo**. It may breed occasionally in the area, as it is listed as an occasional migrant and summer resident at Fontenelle Forest. While it has also been recorded at Squaw Creek NWR, no evidence of breeding has been obtained. Phipps banded one May 8, 1972 (IBL 42:39).

Bell's Vireo (0,0,2,2). Common breeding bird in suitable habitat. Most are found along drainage ditches on the Missouri River bottoms, but a few occur in upland riparian situations.

Yellow-throated Vireo (0,0,0,0). Uncommon breeding bird. A singing male was present near the campground at Waubonsie SP during foray.

• **Solitary Vireo**. This species is included in this report on the basis of a report by Getscher on June 24, 1974. This must have been a sick bird, as Brown considers June 14 to be an "exceptionally late" date. The nearest recognized breeding area for this species is northeast Minnesota (Green and Janssen).

Red-eyed Vireo (0,0,0,0). Fairly common breeding bird at Waubonsie SP.

Warbling Vireo (4,0,0,0). Fairly common breeding bird in stands of large trees, especially cottonwoods.

Black-and-white Warbler (0,0,0,0). Two were seen June 3 and 4 at Waubonsie SP by John and David Bowles and a singing male was found by Roosa, Silcock and Peck June 7 in the same area of the park. No breeding evidence was obtained. However, DeLong reported an adult feeding young at the park June 1968 (pers. comm. to Silcock). These are the only records since Youngworth reported a singing male July 13, 1953 (Brown). These observations suggest that this warbler is a rare breeding bird at Waubonsie SP. Furthermore, it is listed as breeding at De Soto NWR where it is considered uncommon. Rapp states that it is a local and uncommon summer resident in eastern Nebraska, but no recent breeding records are published in NBR. It is a local summer resident in eastern Kansas according to Johnston, but Easterla lists it as a summer resident only in southern Missouri. All these areas are within the breeding range outlined in AOU 5th, but it appears to breed only in localized tracts of woodland.

• **Prothonotary Warbler**. This species probably breeds at Riverton or along the Nishnabotna River, but time and manpower did not allow a specific search to be made during the foray. It is present each summer at Fontenelle Forest (NBR), and has bred at Squaw Creek NWR, where it is considered rare, however.

Worm-eating Warbler (0,0,0,0). A singing male was heard and seen by Silcock and Roosa at Waubonsie SP June 7. It did not appear to be territorial however. Brown notes that it once nested in the southern part of Iowa, but considers it to be only a rare migrant at present. However, Easterla lists it as a rare summer resident in northern Missouri, which suggests that this warbler may breed occasionally in suitable habitat in extreme southern Iowa. The moist ravines at Waubonsie SP would appear to satisfy its requirements.

* **Blue-winged Warbler**. This species is included in this list on the basis of a report by Getscher of it nesting near Hamburg in 1962, and due to the fact that this area is close to the western edge of its breeding range. Bent gives this as "north-central to Arkansas, west-central Iowa (Warrensburg), eastern Iowa (Lacey, Grinnell, Winthrop, McGregor)". Furthermore, Anderson cites Trostler that this species is a scarce summer resident in Pottawattamie County, and Johnston describes it as a possible summer resident in eastern Kansas. Thus it may nest irregularly in this area.

Yellow Warbler (0,0,0,0). Common breeding bird where willows occur.

* **Cerulean Warbler**. As in the case of the Blue-winged Warbler, this area is near the western edge of the breeding range for this species. Bent describes this as "west to southeast Kansas, eastern Nebraska (Omaha; Pilgrim Hill, Dakota County), western Iowa (Sioux City)". While breeding has not been proved, several records of singing males exist for Waubonsie SP (Brown), although it is not present each year. Youngworth found several June 9, 1946 (IBL 16:65), and DeLong recorded one May 25, 1966 but was unable to locate a nest (pers. comm. to Silcock). It appears to breed more commonly in eastern Iowa. Despite careful search, none were found during foray at Waubonsie SP. Published reports in NBR indicate that it was fairly regular until 1973, when it was "harder to find than usual", and in 1974 none were reported. However, it was present in 1975 through June 24, but absent again in 1976. Thus it appears to have become irregular in the last five years.

Ovenbird (0,0,0,0). Uncommon breeding bird at Waubonsie SP. Two or three singing males were heard.

Louisiana Waterthrush (0,1,0,0). There appears to be a small breeding population established at the north end of Waubonsie SP along a small stream in a deep wooded ravine. There were two and possibly three pairs found during foray, one of which was seen feeding a young bird June 5 by Silcock. The same observer also found a singing male in the same area June 5, 1976. Bowles captured and banded an immature bird, scarcely capable of flight. Brown considers this species an uncommon breeder in Iowa, but no summer records west of Boone County are given. However, there are summer records from Fontenelle Forest published in NBR: in the last ten years it was considered a summer resident in 1967, 1968, and 1969, but only a migrant for the last seven years. As with some other warbler species, it is near the western edge of its breeding range here.

Kentucky Warbler (0,0,0,0). This is another warbler near the western edge of its range here. Rapp considers it a "rare to locally common summer resident in southeast Nebraska, especially in the Missouri River Valley, with the northern limit seeming to be Fontenelle Forest, Sarpy County." It is not listed at De Soto NWR, but Brown cited breeding records at Waubonsie SP. A singing male was found at Waubonsie SP June 6 by Silcock, Roosa and Stravers, but could not be found the next day. However one was heard there on July 3 (D. Koenig and J. Schaufenbuel, pers)

Common Yellowthroat (5,19,9,4). Very common breeding bird in suitable habitat.

Yellow-breasted Chat. Getscher provided the following records of its occurrence in Wahsington Township: it nested near Hamburg 1945 and 1946; it was seen in May of 1960 and 1961; and one was seen in Waubonsie SP in June 1961. There are also other early records from the 1940s published in IBL. However, there do not seem to be any records from the area since 1961. It is considered an uncommon summer resident at Fontenelle Forest, but is a common breeder at Squaw Creek NWR. Breeding has been recorded in all parts of Iowa, but it is very habitat specific, such habitat having declined greatly in recent years due to increased land clearing as a result of government incentives to farmers to plant greater acreages in crops.

* **American Redstart.** This is somewhat of a mystery bird in summer in this area. Despite being considered an "abundant breeding bird" in Iowa by Brown, a "common summer resident" at Fontenelle Forest, and an "abundant" breeding bird at De Soto NWR, it has not been found breeding in Fremont County to the writer's knowledge. Although it has been found breeding at Squaw Creek NWR, it is listed as uncommon, thus giving some credibility to its non-breeding status in Fremont County. There appears to be enough suitable habitat, and it is a common to abundant migrant through the area. It was not recorded during foray.

House Sparrow (17,54,32,5). Abundant breeding bird near human activity.

* **Bobolink.** Not reported during foray, but is known to summer near Shenandoah. Suitable breeding habitat is not common in this area.

Eastern Meadowlark (5,14,0,2). Common breeding bird, perhaps more so this year than in 1976. It is found in pastures, either upland or bottomland, but avoids extensively row-cropped areas and roadsides near same, where its place is taken by the Western Meadowlark.

Western Meadowlark (43,9,18,6). Abundant breeding bird.

Yellow-headed Blackbird (0,0,0,0). Common at Riverton GMA during foray; probably breeding. Was not present at Taylor Lake in northern Fremont County June 28, where it was present in 1976. Apparently dependent on water levels for breeding, as Taylor Lake was almost dry this year.

Red-winged Blackbird (86,49,26,31). Abundant breeding bird in both upland and lowland situations.

Orchard Oriole (2,7,7,6). Common breeding bird, especially in riparian areas on Missouri River bottoms.

Northern Oriole (10,9,3,5). Common breeding bird.

Common Grackle (14,20,13,5). Common breeding bird.

Brown-headed Cowbird (13,19,17,0). Common breeding bird.

Scarlet Tanager (0,0,0,0). Fairly common breeding bird at Waubonsie SP, where several singing males were heard. Not found elsewhere.

Summer Tanager (0,0,0,0). Uncommon summer resident at Waubonsie SP. Two or three singing males were located, and none were found elsewhere. Breeding is presumptive only. This is one of the few places in Iowa where the two eastern tanagers breed together.

Northern Cardinal (30,22,3,5). Common breeding bird, mostly in upland wooded areas.

Rose-breasted Grosbeak (20,37,0,1). Common breeding bird, abundant in more extensive woods.

Blue Grosbeak (1,0,9,0). Fairly common breeding bird on the Missouri River bottoms, rare in upland situations.

Indigo Bunting (7,11,2,3). Common breeding bird.

Dickcissel (39,79,64,34). Abundant breeding bird.

American Goldfinch (7,11,2,11). Common breeding bird.

Rufous-sided Towhee (1,6,0,1). Fairly common breeding bird. Usually found in

open areas near extensive woods, and usually in small numbers.

Grasshopper Sparrow (14,1,0,2). Common breeding bird in upland pastures and alfalfa fields, less common on bottomland.

Vesper Sparrow (2,1,1,0). This species can only be described as uncommon as a breeding bird in this area, even though Brown states that it is a common breeding bird in Iowa. At Squaw Creek NWR it is only occasional a breeding bird, and Easterla lists it as a casual summer resident in northwest Missouri. Furthermore, Johnston does not consider it to be a breeding bird in northeast Kansas. It is listed as an uncommon summer resident and breeder at De Soto NWR, but only as a migrant at Fontenelle Forest and surrounding areas. Rapp states that it is a rare breeder in the eastern quarter of Nebraska. Apparently southwest Iowa is near the southwestern limit of the breeding range of the eastern subspecies of the Vesper Sparrow, there being a gap between it and the breeding range of the western subspecies.

Lark Sparrow (0,0,0,0). Uncommon summer resident, but can usually be found around dry or sandy areas near the Missouri River or along the loess bluffs. It is listed as an uncommon breeding bird at both Squaw Creek NWR and De Soto NWR.

Chipping Sparrow (0,0,0,1). Reported by Getscher during foray period. Generally distributed, but local and probably best considered a fairly common breeding bird. However, it is listed as uncommon at Squaw Creek (NWR and at Fontenelle Forest, and is unlisted at De Soto NWR. As in the case of the Vesper Sparrow, it seems to be less common in southwest Iowa than in the rest of the state. Johnston considers it a locally common breeder in eastern Kansas and Rapp lists it as a locally common breeder throughout Nebraska. It seems to prefer areas of mowed lawn near trees and shrubs, such as parks, cemeteries, and gardens.

Field Sparrow (8,2,4,4). Common breeding bird, especially noticeable in areas of prairie within the loess bluffs.

Song Sparrow (5,1,0,2). Common breeding bird in riparian habitats such as at Riverton GMA, along drainage ditches, and beside the Missouri River.

Breeding Bird Routes

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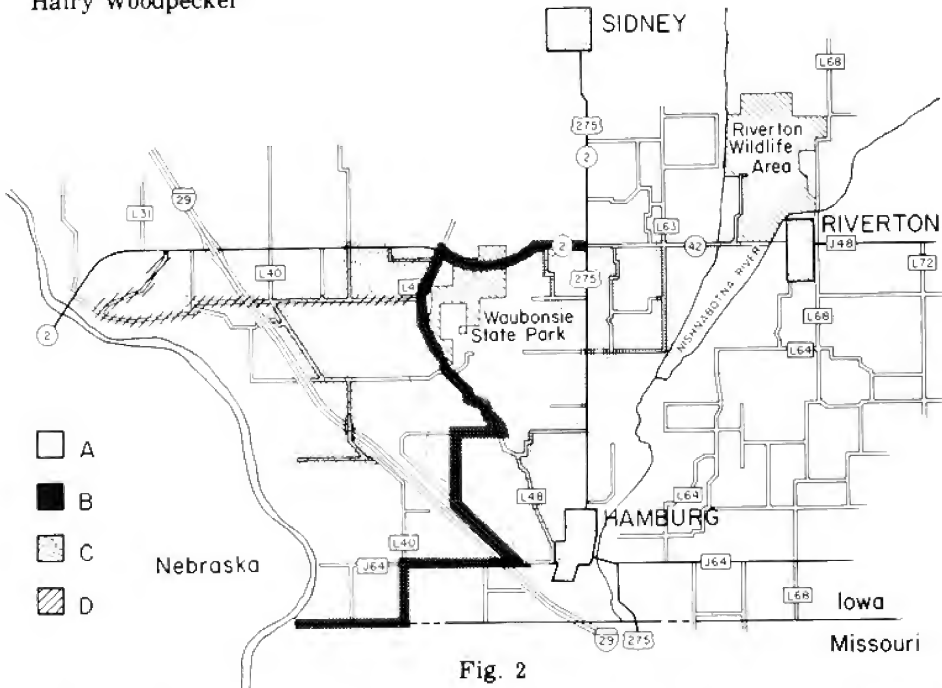
As a survey technique to help provide baseline data on breeding birds in the foray area, four breeding bird routes were established. These were patterned after the U.S. Fish and Wildlife Service Breeding Bird Survey routes, except they were not randomly selected and were not 25 miles long. Observers began one-half hour before sunrise and made three minute stops at intervals of one-half mile to watch and listen.

Routes were generally in Washington Township of Fremont County, with the edge of Riverton Wildlife Area and the extreme southwest portion of Benton Township being covered by one end of routes A and D, respectively (see Fig.2 for map of routes).

Route A. (37 stops) From Riverton Wildlife Area, through rolling country and steep loess, along the base of wooded steep loess hills, ending at Hamburg.

Route B. (31 stops) From junction of Highway 2 and 275 west through wooded terrain, through Waubonsie Park, along base of wooded steep loess, through Missouri River floodplain, along dredge ditches and a railroad, ending at wooded bottomland adjacent to Missouri River on Iowa-Missouri state line.

Fig. 2. Map of region including study area, which was the portion between the two streams, plus Riverton Wildlife Area. Breeding Bird Routes are shown in dark. Top of map is north.
Hairy Woodpecker



Hickory communities, the uplands young successional woodlands dominated by Bitternut Hickory (*Carya cordiformis*) or Ironwood (*Ostrya virginiana*), the lowlands are typical floodplain, often weedy, vegetation. Additionally, some uplands were either still open and kept mowed or successional areas, rapidly being invaded by woody vegetation. Past disturbance is apparent as noted by signs of logging, old roads, etc. The entire area, especially the ridgetops, was prairie in the distant past as evidenced by the presence of prairie vegetation still persisting and scattered in the woodlands, and by scattered large, open-grown oaks. These old relics had diameters ranging from 28 in. (71 cm.) to 41.3 in. (105 cm.), with crowns ranging from 59 ft. (18.2 m.) to 78 ft. (23.7 m.).

In addition to good bird habitat, an important criteria was the assurance that the plots would remain in nearly their present conditions for future comparative studies. This limited the selection primarily to state-owned lands.

After compiling the data and looking critically at the study areas, I feel that smaller areas encompassing a discrete habitat type would be more appropriate in future forays.

North Bridle Path Area (Oak-Hickory)

Location: The North, or 'Bridle Path' portion of Waubesa State Park, Fremont County, Iowa. The study area lies partly in Washington and Benton townships. This portion of the park was purchased after the main part of the park and has been subjected to more recent disturbance.

Size: From a 1 in. equals 660 ft. map of the park, a rectangular area 2750 ft. x 3100 ft. (838 m x 942 m.) was used for computing the singing male count. This figures to very nearly 200 acres (81 hectares).

Topography: Deep loess dissected by steep-sided valleys with intermittent streams. Small floodplains exist along the streams. There are flat uplands, some still open, some being rapidly invaded by woody vegetation.

Community description: Mature woodlands on valley sides and ridgetops; dominant canopy is Oak-Hickory (*Quercus rubra* or *Q. muhlenbergii* - *Carya ovata* or *C. cordiformis*), with scattered Red Elm (*Ulmus rubra*), Basswood (*Tilia americana*), Hackberry (*Celtis occidentalis*) or American Elm (*Ulmus americana*). The major sub-canopy tree is Ironwood (*Ostrya virginiana*) with minor components being Red Elm, Hackberry, and, on the lower slopes, Redbud (*Cercis canadensis*). The shrub layer contains Wolfberry (*Symphoricarpos occidentalis*), many young Ironwood saplings, Gray Dogwood (*Cornus drummondii*), Gooseberry (*Ribes missouriense*), Raspberry (*Rubus occidentalis*), and Poison Ivy (*Rhus radicans*). In the herb layer was found Greenbriar (*Smilax hispida*), Tick Trefoil (*Desmodium glutinosum*), Hogpeanut (*Amphicarpa bracteata*), Lopseed (*Phryma leptostachya*), Moonseed (*Menispermum canadense*), Horse Gentian (*Triosteum perfoliatum*), Maidenhair Fern (*Adiantum pedatum*) and Creeping Fragile Fern (*Cystopteris protrusa*). Plots established in this community-type were used to determine tree density (Mueller-Dombois and Ellenberg, *Alms and Methods of Vegetation Ecology* 1974). These plots, corrected for slope (Mueller-Dombois and Ellenberg, 1974) yielded estimates of 410 to 700 trees per acre (1012 to 1729 trees-hectare), canopy 50 to 60 percent closed. Only those with trunks of 2.5 in. (6 cm.) or greater in diameter are included. The most outstanding feature of the woodland is the presence of the large Red and Chestnut Oaks. These generally had diameters of from 11 to 23.6 inches (28-60 cm.), with the scattered relic trees mentioned earlier. There is nearly complete absence of reproduction of Oaks in the forest. With the complete absence of Sugar Maples (*Acer saccharum* var. *nigrum*) in the park, the assumption is made that the climax community will be a composite of Basswood-Red Oak.

Table 1

Species	Territorial Males	Males-100 acres	Males-100 hectares
Common Bobwhite	1	.5	1.23
Mourning Dove	23	11.5	28.4
Yellow-billed Cuckoo	8	4.0	9.9
Black-billed Cuckoo	1	.5	1.23
Great Horned Owl	1	.5	1.23
Whip-poor-will	2	1.0	2.47
Common Flicker	1	.5	1.23
Red-bellied Woodpecker	7	3.5	8.6
Red-headed Woodpecker	4	2.0	4.9
Hairy Woodpecker	2	1.0	2.47
Downy Woodpecker	6	3.0	7.41
Great Crested Flycatcher	14	7.0	17.3
Willow Flycatcher	1	.5	1.23
Eastern Pewee	9	4.5	11.1
Blue Jay	19	9.5	23.5
Common Crow	vis	vis	vis
Black-capped Chickadee	5	2.5	6.2
Tufted Titmouse	23	11.5	28.4
White-breasted Nuthatch	5	2.5	6.2
House Wren	67	33.5	82.7
Brown Thrasher	3	1.5	3.7
Wood Thrush	3	1.5	3.7
Bell's Vireo	1	.5	1.23
Red-eyed Vireo	8	4.0	9.9
Ovenbird	2	1.0	2.47
Kentucky Warbler	1	.5	1.23
Northern Oriole	7	3.5	8.6
Orchard Oriole	1	.5	1.23
Brown-headed Cowbird	2	1.0	2.47
Scarlet Tanager	9	4.5	11.1
Northern Cardinal	18	9.0	22.2
Rose-breasted Grosbeak	38	19.0	46.9
Indigo Bunting	9	4.5	11.1
American Goldfinch	vis	vis	vis
Rufous-sided Towhee	12	6.0	14.8
Chipping Sparrow	2	1.0	2.47
Field Sparrow	2	1.0	2.47
Total	317	158.5	391.5
Total species	39		

Valley-floors: Canopy consists of a mixture of Honey Locust (*Gleditsia triacanthos*), Black Locust (*Robinia pseudoacacia*), Kentucky Coffee Tree (*Gymnocladus dioica*) and Walnut (*Juglans nigra*). All were somewhat uncommon and no one species dominated. The sub-canopy contained Red Mulberry (*Morus rubra*), Redbud, Hackberry and Ironwood. In the shrub layer, Raspberry, Gooseberry and Wolfberry were most common. The herb layer contained the following: Stinging Nettle (*Urtica dioica*), Bedstraw (*Gallium triflorum*), Foxtail (*Setaria lutescens*), Nightshade (*Solanum dulcamara*), Maidenhair Fern, Creeping Fragile Fern and Lopseed.

Disturbed Uplands: Dominated by dense, small diameter trees; plots yielded estimates of 690 trees per acre (1704 trees per hectare).

Canopy: Basswood, Black Locust, Red Elm, Red Oak.

Sub-canopy: Ironwood, Redbud, Bitternut Hickory and Red Elm.

Shrub Layer: Wolfberry, Gooseberry, Ironwood Saplings, Greenbriar.

Herb Layer: Meadow Rue (*Thalictrum dioicum*), Creeping Fragile Fern, Bedstraw, Horse Gentian, Moonseed and Poison Ivy.

Successional Uplands: These successional flat ridgetops, formerly prairie, are being heavily invaded by Smooth Sumac (*Rhus glabra*), Gray Dogwood, Box Elder (*Acer negundo*), Red Oak and Siberian Elm (*Ulmus pumila*). Herbaceous plants include Partridge Pea (*Chamaecrista fasciculata*), Common Milkweed (*Asclepias syriaca*), Bull Thistle (*Cirsium vulgare*), Muellin (*Verbascum thapsis*) and Sweet Clover (*Melilotus officinalis*). Remnant species such as Little Blue Stem (*Andropogon scoparius*) and Indian Grass (*Sorghastrum nutans*), are still found scattered throughout the openings. These successional uplands provide good habitat for many bird species.

Ranger's House Area (Oak-Hickory)

Location: Waubesa State Park, area between Ranger's house and highway. This tract lies entirely within Washington Township, Fremont County.

Size: A 2700 ft. x 1350 ft. (823 x 410 m.) rectangle was used for the second singing male count. Subtracted from this area was the triangular piece north of the highway. The study area computed to 72 acres (29.1 hectares).

Topography: Deep loess dissected by deep ravines with intermittent or permanently flowing streams.

Community Description: Basically an oak-hickory forest, with disturbed areas or remnant prairies on uplands. Some areas are disturbed successional areas.

Mature Forest Canopy: Red Oak, Chestnut Oak, and Shagbark Hickory dominate with scattered Red Elm, American Elm and Hackberry.

Sub-canopy: Ironwood dominates, with Redbud and Red Mulberry being important on the lower slopes.

Shrub Layer: Wolfberry, young Ironwoods, Gray Dogwood and Poison Ivy dominate.

Herb Layer: Greenbriar, Hog Peanut, Moonseed, Bedstraw and Maidenhair Fern were found. Plots were laid out to estimate the density of trees; these plots yielded estimates of 610 and 630 trees per acre (1507-1556 trees-hectare). In this tract is probably the largest stand of Paw Paw (*Asimina triloba*) in Iowa. The diameter of these trees is mostly 3.1 to 3.5 inches (8-9 cm.) with a few 4 inches (10 cm.) and a maximum of 4.72 inches (12 cm.). Some small areas, apparently recovering from disturbance, have a high density of small diameter trees. One of these areas, just above the footbridge, yielded a density equivalent to 1920 trees per acre (4740 trees-hectare). The most abundant tree was Ironwood, with Redbud, Red Oak and Bitternut Hickory being less important.

Ridgetops: Open prairie areas, being rapidly encroached by woody vegetation such as Smooth Sumac and Gray Dogwood. These areas were of very limited extent on this study area.

The large oaks scattered through this study area are the most outstanding visual feature. They have diameters ranging from 10.6 to 15.8 inches (27-40 cm.) and have a density of 60 to 80 per acre (148-198 trees-hectare) as estimated by plots established within the tract.

Table II

Species	Territorial Males	Males-100A	Males-100 hectare
Common Bobwhite	1	1.4	3.46
Mourning Dove	2	2.8	6.9
Yellow-billed Cuckoo	5	7	17.3
Black-billed Cuckoo	1	1.4	3.46
Whip-poor-will	2	2.8	6.9
Chimney Swift	vis	vis	vis
Common Flicker	3	4.2	10.4
Red-bellied Woodpecker	3	4.2	10.4
Red-headed Woodpecker	4	5.6	13.8
Hairy Woodpecker	1	1.4	3.46
Downy Woodpecker	1	1.4	3.46
Great Crested Flycatcher	3	4.2	10.4
Eastern Pewee	4	5.6	13.8
Rough-winged Swallow	2	2.8	6.9
Blue Jay	4	5.6	13.8
Tufted Titmouse	8	11.2	27.6
White-breasted Nuthatch	5	7	17.3
House Wren	19	26.6	65.5
Gray Catbird	2	2.8	6.9
Wood Thrush	2	2.8	6.9
Red-eyed Vireo	3	4.2	10.4
Ovenbird	1	1.4	3.46
Louisiana Waterthrush	2	2.8	6.9
Kentucky Warbler	1	1.4	3.46
Northern Oriole	3	4.2	10.4
Scarlet Tanager	3	4.2	10.4
Summer Tanager	1	1.4	3.46
Northern Cardinal	5	7	17.3
Rose-breasted Grosbeak	10	14	34.6
Indigo Bunting	1	1.4	3.46
Total	102	142.8	352.7
Total species	30		

Bell's Vireo Singing Male County

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In recent years, the Bell's Vireo (*Vireo bellii*) has apparently been declining across North America; and is included on the 1977 'Blue List' (Arbib. *Am. Birds* 30 p. 1031-1039, 1977) Because it appeared to be declining in Iowa, a special attempt was made during the foray to determine its status in a portion of Fremont County known to have good nesting habitat. Washington Township, except for the Nishnabotna River bottoms on the eastern border, was surveyed for singing males, with special emphasis on a seven mile stretch of 'Main Ditch'. This ditch

was last dredged out after the 1952 flood, so vegetation has been developing along it for 25 years. Woody vegetation is a mixture of Mulberry (*Morus alba*), Elderberry (*Sambucus canadensis*), Dogwoods (*Cornus drummondii* and *C. obliqua*), Wild Plum (*Prunus americana*) and Willows (*Salix* sp.).

Results

On the approximate seven-mile stretch of Main Ditch, 29 singing males were heard. Additionally, 4 singing males were heard on the breeding bird routes and one in the shrubby uplands of Waubonsie Park, bringing to 34 the males heard singing. They also were abundant in Plymouth County in 1977 (Larry Farmer, pers. comm.).

Acknowledgements

Sincere thanks are due Fred Priewert, Director, Iowa Conservation Commission and Joe Brill, Superintendent of Parks, Iowa Conservation Commission for permits to capture certain species and for permission to utilize Waubonsie State Park as a study area and headquarters. Thanks also to Vern Haufle, Waubonsie Park Ranger, for kindness shown during the foray, and to Larry Pool, Iowa Conservation Commission, for preparing the map.

Update of Mammals of Fremont County

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PELLA

Few county lists of mammals have been published in Iowa although the general status of the state mammalian fauna recently was reviewed and updated (Bowles, 1975). The only list for Fremont County that I have seen was published in 1881 (Anonymous, 1881). Unfortunately, that list did not document evidence for inclusion of species and a few, notably the Red Squirrel (*Tamiasciurus*) were not within the known or documented historical ranges. This paper is an attempt to summarize the current information on mammals of Fremont County and to point out where additional work is needed. Unless otherwise indicated, records previously published and all common and scientific names are found in Bowles (1975). Additionally, the results of two recent trips to southwestern Iowa (including the 1977 foray) are reported herein.

Species of Positive or Probable Occurrence

Documented by specimens or recent literature -- Opossum, Least Shrew, Short-tailed Shrew, Keen's Myotis previously unreported), Evening Bat, Eastern Cottontail, Woodchuck, Franklin's Ground Squirrel, Gray Squirrel, Fox Squirrel, Plains Pocket Gopher, Plains Pocket Mouse, Western Harvest Mouse, White-footed Mouse, Deer Mouse, Hispid Cotton Rat, Southern Bog Lemming, Prairie Vole, Meadow Vole (previously unreported), Woodland Vole, House Mouse, Raccoon, Coyote, Striped Skunk, Bobcat, Mule Deer, and White-tailed Deer (Gladfelter, 1973).

Unreported but within known range -- Eastern Mole, Little Brown Bat, Indiana Myotis, Silver-haired Bat, Eastern Pipistrelle Bat, Big Brown Bat, Red Bat, Hoary Bat, White-tailed Jack Rabbit, Eastern Chipmunk, Thirteen-lined Ground Squirrel, Flying Squirrel, Muskrat, Beaver (since reestablishment), Norway Rat, Red Fox, Gray Fox, Long-tailed Weasel, Least Weasel, Mink, Badger, Spotted Skunk, and River Otter (since reestablishment).

Extirpated or Reestablished Species

Historical records (Bowles, 1971). -- Beaver (prior to reestablishment), Gray Wolf, White-tailed Deer (prior to reestablishment), and Bison. Although I know of no literature records, Fremont County certainly was within the range of the Black Bear, River Otter (prior to reestablishment), Mountain Lion, Wapiti, and Pronghorn.

Unreported Records from Southwestern Iowa

Fremont County -- 3 mi. S, 1 mi. E. Imogene: 5 Short-tailed Shrews (see discussion below), 4 Prairie Voles, 2 Meadow Voles (new county record), 1 Western Harvest Mouse, and 1 White-footed Mouse; Waubesa State Park (1977 foray): 5 Short-tailed Shrews, 1 Keen's Myotis (new county record), 1 Woodland Vole, 10 White-footed Mice; ½ mi. N, 1 mi. W. Riverton (1977 foray); 5 Western Harvest Mice, 12 Field Voles (new county record), 1 House Mouse, Mills County -- 3½ mi. S., 2½ mi. W. Hillsdale: 3 Short-tailed Shrews (see discussion below), 3 White-footed Mice, 3 Deer Mice, 1 Southern Bog Lemming, and 6 Prairie Voles.

Species of Special Interest

It is fair to say that for each species of mammal in the state, more can be learned of its biology -- especially distributional and reproductive patterns and ecological requirements. The following species, however, are of particular interest because of the paucity or lack of records and the fact that Fremont County lies on or near the known limits of their ranges.

Masked Shrew. -- This species reaches its southern limits in south-central Iowa (as close as Adams County) and records from Fremont County would certainly be of interest.

Short-tailed Shrew. -- The two closely related forms (considered now as distinct species by most) are known from 15 miles apart, with the smaller species (*Blarina carolinensis*) taken at the Imogene site and the larger (*Blarina brevicauda*) from near Hillsdale, Mills County. Certainly trapping between these two sites should indicate if there is a zone of contact or an area where neither exist. To the east, the critical area lies between Bedford, Taylor County, and Mount Ayr, Ringgold County.

Indiana Myotis. -- Almost nothing is known of the status of the Indiana Myotis in southern Iowa although it almost certainly occurs in Fremont County since pregnant females are known from northwestern Missouri (Easterla and Watkins, 1969).

White-tailed Jack Rabbit -- Although common to the north, there are only scattered records of the jack rabbit in southern Iowa and none from Fremont County.

Eastern Chipmunk. -- Almost certainly the Eastern Chipmunk occurred in southwestern Iowa when forests were more extensive there. However, I know of no recent records from that region of the state although a small population was reported from Sarpy County, Nebraska. It would be of considerable interest to locate populations of this species in Fremont or adjacent counties.

Southern Flying Squirrel. -- Although Fremont County is within the known range of this species, little is known of its current distributional status in the southwestern portions of the state. As with the Eastern Chipmunk, local populations may exist in denser forest stands and, if so, their occurrence should be documented.

Plains Pocket Mouse. -- While the only known specimen from extreme southwestern Iowa was taken in a "potato patch" in 1935 (Fichter, 1939), this species should be sought in the loess bluff area as it has been found there in northwestern

Missouri (Easterla, 1967).

Hispid Cotton Rat. -- This species still is known only from owl pellets taken in Waubesa State Park. Farney (1975) summarized recent records of the Cotton Rat from south-central Nebraska and it should be continually sought in southwestern Iowa, especially in roadside ditches of brome grass.

Meadow Jumping Mouse. -- This unreported species is known from as close as Union County and may well be found to occur farther to the southwest.

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CONVENTION



The Iowa Ornithologists' Union held their fall meeting in the Council Bluffs area on October 29-30, 1977. Many members of the group met at DeSoto National Wildlife Refuge on Saturday afternoon for bird watching in the area. It was fairly warm, clear afternoon and the numbers of Snow Geese were low.

On Saturday evening the group met at the Council Bluffs Holiday Inn for a banquet and program. Though the temperature remained constant and did not blow hot and cold as the previous year, the Inn's food was notably poor. Following the banquet Ross Silcock of Malvern, host of the meeting, discussed the Sunday morning field trips and welcomed the group to Council Bluffs. President George Crossley of Dubuque answered the welcome and thanked Ross for all of his efforts in arranging the meeting. He expressed his pleasure in seeing the old and new members. He introduced the head table and then announced that field reports should be in to Dr. Nickolas Halmi of Iowa City no later than November 30. He urged more people to report the birds they see in the field. Peter Petersen of Davenport announced that the December issue of **Iowa Bird Life** would contain an article about the rare bird reports. It was mentioned that a commendation was in **American Birds** for our state bird list. President Crossley announced that the spring meeting will be held in Sioux City, Iowa on May 5-7, 1977. President Crossley

then announced that he appointed the following committees: Dick Mooney and Woodward Brown of Des Moines as the auditing committee and Herb Dorow of Newton, Genevieve DeLong of Lamoni and Lilian Liljedahl of Marion as the nominating committee. A letter from Gladys Black of Pleasantville was read concerning Senate Bill 1140 which is for funds for non-game species. She felt the members should write Senators Culver and Clark expressing our support for this bill. Fitzhugh Diggs of Hamburg mentioned that a gallon plastic jug on the pole of a feeder keeps squirrels out. President Crossley announced there were 75 registrants at the meeting and he had the new members introduce themselves.

Vice president Carl Kurtz of St. Anthony introduced the evening's speaker, Ross Silcock. Dr. Silcock grew up in New Zealand and is now an Iowa hog raiser. Ross showed pictures and discussed some of the native birds of New Zealand, a most interesting program. He told the group that many of the birds one sees in New Zealand, over 50 species, were pelagic and some are found only on the offshore islands. He said many of the shorebirds are from Australia, Asia or North America. Following the program there was a question and answer period.

A slide fest followed the banquet program. Carl Kurtz has excellent slides of White Pelicans at Red Rock. Nick Halmi had some slides of a "secret" bird taken at Big Bend National Park. He finally relented and told the group that it was juvenile Aztec Thrush. This was the first sighting of the bird outside of Mexico. Peter Petersen followed with slides of an Ivory Gull, Purple Sandpipers and Gannets at Bonaventure Island. Keith and Irene Layton followed with some birds they've banded. Irene made a plea for the group to continue writing their legislators against the proposed Dove season. The meeting adjourned. On Sunday the members met at the Holiday Inn for the field trips. The group did not reassemble so there was no formal compilation. -- Mary Lou Petersen.

Bird list -- October 29 and 30, includes observations in Iowa, Missouri and Nebraska.

Common Loon, Horned Grebe, Eared Grebe, Pied-billed Grebe, White Pelican, Double-crested Cormorant, Great Blue Heron, Greater White-fronted Goose, Snow Goose, Ross' Goose, Canada Goose, Wood Duck, American Wigeon, Gadwall, Green-winged Teal, Mallard, Common Pintail, Blue-winged Teal, Northern Shoveler, Canvasback, Redhead, Ring-necked Duck, Lesser Scaup, Ruddy Duck, Bald Eagle, Northern Harrier, large accipiter (sp), Red-tailed Hawk, Swainson's Hawk, Rough-legged Hawk, American Kestrel, Common Bowwhite, Ring-necked Pheasant, American Coot, Killdeer, Ring-billed Gull, Bonaparte's Gull, Rock Dove, Mourning Dove, Belted Kingfisher, Common Flicker, Red-bellied Woodpecker, Red-headed Woodpecker, Downy Woodpecker, Horned Lark, Tree Swallow, Blue Jay, Common Crow, Black-capped Chickadee, Tufted Titmouse, White-breasted Nuthatch, Red-breasted Nuthatch, Brown Creeper, Winter Wren, Marsh Wren, American Robin, Gray-cheeked Thrush, Eastern Bluebird, Golden-crowned Kinglet, Ruby-crowned Kinglet, Cedar Waxwing, European Starling, Yellow-rumped Warbler, House Sparrow, Eastern Meadowlark, Western Meadowlark, Red-winged Blackbird, Rusty Blackbird, Common Grackle, Brown-headed Cowbird, Purple Finch, Pine Siskin, American Goldfinch, Rufous-sided Towhee, Savannah Sparrow, Le Conte's Sparrow (WH), Northern Junco, American Tree Sparrow, Harris' Sparrow, White-crowned Sparrow, White-throated Sparrow, Fox Sparrow, Lincoln's Sparrow and Song Sparrow -- 85 species.

Registered Attendance

AMES: Marilyn S. Glasson, Hank and Linda Zaletel.

AUBURN: Rita Efta.
BOONEVILLE: Eloise and Eugene Armstrong.
CARROLL: Lucille Fast, Eva Wiedemeyer.
CEDAR FALLS: Eleanor Corwin, Lois Sherman.
CEDAR RAPIDS: Roberta Oppendahl, Myra G. Willis.
CENTERVILLE: Bill and Mary Heusinkveld.
CHEROKEE: Sandi Beals, Shirley A. Wahlstrom.
COUNCIL BLUFFS: Patty Rieck.
DAVENPORT: Mary Lou and Peter Petersen.
DES MOINES: Mary and Woodward Brown, Ruth Buckles, Nancy E. Davidson,
Betty Ford, Elva and Jim Gritton, Dick and Paully Mooney, Barbara Ray,
Mark Rouw.
DUBUQUE: Frieda and George Crossley.
ESSEX: Betty Walters.
HAMBURG: Fitzhugh and Hazel Diggs, Ione Getscher.
IOWA CITY: N. S. Halmi, Bernie and Calvin Knight, Carol and Michael Newlon.
JAMAICA: Gene and Marilyn Burns.
LAMONI: Genevieve DeLong.
LOHRVILLE: Margaret Seeck.
MALVERN: Lyn and Ross Silcock.
MARION: Lucile Liljedahl.
MARSHALLTOWN: Marlys Huff, Curt Kriefer, Robert Trottmann.
NEWTON: Edith and Herb Dorow.
OSKALOOSA: Irene and Keith Layton.
OTTUMWA: Nelson and Randall Hoskins, Don, Elaine and Tom Johnson.
PAULLINA: Harace and Mary Autenrieth.
ST. ANTHONY: Carl Kurtz.
SHENANDOAH: Rebecca Bernthal, Jean B. Braley, Barbara Cunningham, Ruth
Phipps, Marie Spears, Mary Beth Vaughn.
SPENCER: Ellen and Russ Hein.
WATERLOO: Eleanor and Lowell Miller.
WESTFIELD: Larry K. Farmer.
BELLEVUE, NEBRASKA: Ruth Green.
TOTAL: 75.

FIELD REPORTS



Fall 1977

The species marked with * are on the National Audubon Blue List (Am. Birds 30:1031, 1976), the Iowa Blue List (I.B.L. 45:95, 1975), and-or on Dean Roosa's list of endangered, threatened or declining species in Iowa (I.B.L. 46:40, 1976).

General Comments. August ended the long drought in Iowa, with up to a foot of rain in some places. The farmers' gain was, in some respects, the birders' loss: virtually all shorebird habitat was wiped out by the end of the first week of August. Temperatures were below average, and the migration of many passerine species

(vireos and warblers) peaked before September 1. September was an average month; October and November were again wet, and on the cold side. Record-breaking cold before Thanksgiving may have cleared the state of many lingering members of half-hardy species. In pleasant contrast to last year's, this promises to be a northern finch winter (unless they, as the Evening Grosbeaks seem to have done, move quickly to even more southern destinations).

Abbreviations used. CoR: Coralville Reservoir; HHP: Hickory Hill Park, Iowa City; RRR: Red Rock Lake, Reservoir and Refuge; SR: Saylorville Reservoir; YRF: Yellow River Forest; L.: Lake; M.: Marsh; N.W.R.: National Wildlife Refuge; S.P.: State Park.

Loons through Bitterns. Com. Loons were reported in small numbers from large bodies of water, but the peak count at the CoR (16 on November 2, NH) was a local record. Two small loons on L. Manawa, November 20, could have been *Gavia arctica*, but Silcock cautiously refused to rule out the possibility that they were small individuals of *G. immer*. There were no sizable flocks of Horned Grebes anywhere. Four Eared Grebes were found in Mills Co. on October 30 (RS). A *W. Grebe first spotted on October 27 (NH) stayed for a week on the CoR, and was seen by many. On October 30, it was joined briefly by 2 more (TK). One was also present at Storm L., closer to its normal range, on October 28 (DB). *Am. White Pelicans moved through the w. and c. parts of the state in truly impressive numbers: for example, 150 were observed on August 21 at Trumbull L. (R. Sojda fide JD), 250 in Calhoun Co. on September 24 (TN), and 1000 at Union Slough on September 13 (O. Knauth fide GBl). At RRR, Carl Kurtz and Jon Stravers counted 420 from a canoe on September 29; the last bird departed on November 18 (GB). *Double-crested Cormorants figured in numerous reports: 4 at SR on September 22 (WB) and 12 on October 14 (JD); at least 3 on the CoR October 8-22 (TK, NH), and 7 flying across it on October 14 (RD); 12 at RRR in September (GBl). But the largest number were seen by participants in the IOU fall meeting at the De Soto N.W.R. on October 28 -- more than 60 birds, about half of them immatures. The usual fall congregations of Great Blue Herons were unimpressive: 100 at RRR (GBl) and a peak of short duration (50 birds) at the CoR in early September (NH). An imm. Little Blue Heron at SR was seen on October 11 (RM). Cattle Egret sightings are up, and not only because of Dr. Dinsmore's special interest in this Old World pilgrim's progress. In addition to the 18 birds reported fide JD, there were 25 more observed between August 23 and November 4, from 2 in the extreme southeast (BH) to 2 in the s.w. corner of the state (IG), 5 at SR on September 24 (WB) constituting the northern limit, and 15 near RRR September 24-30 (GBl) the largest flock. Eight Great Egrets were observed along n. portions of the Mississippi up to Oct 15, (JSc), 7 on September 24 by the CoR (NH), and a maximum of 25 at RRR (GBl). *Black-crowned Night Herons were seen at RRR (3 on September 26) and along the Skunk River (2 on August 9) (JSt); 12 were counted by the SR on October 14 (TN). A single Least Bittern occurred at RRR on August 13 (JSt), but 4 could be flushed at Sweet M. in Bremer Co. (TSt). All *Am. Bitterns reported were singles: one at Hendrickson M., Story Co. (TN), another at Cardinal M., Wineshiek Co., August 7 and 10 (JSc), and a third by the CoR on October 2 (TK).

Swans through Ducks. The only report of Whistling Swans came from the northeast: 30 at Lock and Dam 9 on November 18 (DK). Waterfowl migration was short on highlights. Maxima for Canada Geese were 2000 at RRR (low, GB), and 2000+ on November 12 at Mark Twin N.W.R. (PP). There was only one mention of Gr. White-fronted Geese e. of their main flyway (6 at RRR on September 26, JSt). An imm. Ross' Goose was banded, photographed and released on November 21 at De Soto N.W.R. (MG, LZ). All regularly occurring species of ducks were seen this fall at RRR and the CoR, but few of them in remarkable numbers (80,000

Mallards and 7-8000 Green-winged Teals in the RRR area, GB1). The highest count of *Canvasbacks reported was 60 at Mark Twain N.W.R. on November 12 (PP). Three White-winged Scoters on the CoR, October 22, were independently seen by 2 observers (TK,NH). A female Surf Scoter in Polk Co. on November 5 was documented (WB).

Diurnal Raptors. This has been an exceptional fall for birds of prey. The maximum count for Turkey Vultures was 100 in early October at the RRR (GB1). An early N. Goshawk was part of a massive hawk movement over HHP on September 18 (MN). At the same time, 27 *Sharp-shinned Hawks and 12 Accipiter sp. were observed. The news about Sharp-shinned Hawks was generally favorable: 20 seen in the Iowa City area September 2-October 27 (RD), 29 in n.e. counties September 4-November 26 (JSc), 18 banded at Davenport September 3-October 14 (PP), and 5 over the CoR on October 8 (TK,NH). M. Newlon's personal edition of a mini-Hawk Mountain also included a *Cooper's Hawk. One seen 2 days later at HHP may have been the same individual (September 20 RD). Another was at St. Lucas on September 10 (JSc). Petersen banded his first Cooper's Hawk since 1973, and they were present in good numbers (Gbu). A large accipiter at De Soto N.W.R. on October 28 (RS,PP,NH) was probably a female Cooper's. *Red-shouldered Hawks continued to be seen until November 18 on their known n.e. breeding grounds (DK). Two were seen S. of Dubuque on November 20 (B. Herrmann fide GC), and one each at Sweet M. (an imm. on August 13, JSc) and HHP (October 1, RD). Kettles of Broad-winged Hawks consisted of 67 at Waucoma on September 24 (JSc), 100+ in Warren Co. on October 14 (GB1), and 258 that formed the core of the HHP "happening" on September 18 (MN). Reports of *Swainson's Hwks are never routine. This fall, we learned of the remarkable occurrence of breeding at Cedar Falls, with 4 young hatched and one surviving, last seen August 28 (TSt et al, including Iowa's raptor expert par excellence, Dean Roosa). Also, one at Ridgeway on August 10 (JSc), 4 (2 on August 6, 2 on September 17) e. of Sweet M., documented (TSt et al.), and 2 in Fremont Co., October 24-26 (RS). Equally remarkable was an imm. Ferruginous Hawk documented for the vicinity of Shenandoah (October 16, RP). There were several sightings of Rough-legged Hawks, first seen on September 12 (DB), with "more than ever" in the Hamburg area (IG). Three Golden Eagles (one adult, 2 imm.) were observed on November 25-26 in Allamakee Co. (DK) (no further details). Bald Eagles moved in along the larger rivers and lakes on schedule, but one at RRR on September 24 was the earliest on record for the area (JSt). *N. Harriers were fairly common, good counts being 12 between September 7 and November 23 in n.e. counties (DK) and 14 in Marion Co. on September 13 (JSt). *Ospreys were seen by numerous correspondents in late September and early October, and all over the state (one to 3); "many" at Sweet M. (TSt) August 15-September 28 may be a slight hyperbole. Another candidate for top honors among the fall's rare raptors is a *Prairie Falcon, whose critical field marks were seen on October 16 in Fremont Co. (RS). A Peregrine Falcon, judged to be an adult male (small size?) was sighted on October 2 and again on October 10, then from 40 feet, by an experienced birder (DM). An equally good look of a *Merlin was obtained on October 17 (DB). Detailed descriptions of these falcons were not provided. Once again, the reports on *Am. Kestrels were conflicting: very few around Iowa City, at RRR (GB1) and near Hamburg (IG), but 18 banded September 11-19 (DM), 16 seen on a single day (September 13) by G. Armstrong (fide WB), and "abundant" near Cherokee (MB), where indeed 173 (!) were counted on October 1 (DB).

Gallinaceous Birds through Terns. Fifteen Ruffed Grouse were seen at YRF on November 18 (DK). Nobody commented on Com. Bobwhites. Information on their status would be desirable because of serious declines in Illinois. Wild Turkeys

were reported in small numbers from the Volga L. area (JSc), and 40-50 at Swiss Valley (R. Walton fide GC) indicated good reproductive success. Am. Coots peaked at 1500+ near Lock 13 on November 5 (PP). This was the poorest migration of shorebirds in years. Other than Killdeer, the only plovers seen were 4 Lesser Golden near RRR (October 13, GBl) and 3 Black-bellied by the CoR (September 29, NH). Am. Woodcocks were regular at Pine Hill Cemetery into early November, and 2 were banded (PP). A compact flock of 25 Com. Snipe along U.S. 218 in Johnson Co. on October 22 was unusual (NH). The only Upland Sandpiper reported was seen in Franklin Co. along I-35 (JD). Six Willets were observed by the CoR before the monsoon season started (August 6, NH,MN). The only peeps of interest were 6 Baird's Sandpipers at Cardinal M., August 13 (JSc). One-2 Stilt Sandpipers occurred at Cone M., Louisa Co., in early August (RD,NH). The season's best shorebird, a N. Phalarope, was an unexpected find in a farm puddle S. of Iowa City on September 5 (NH,TK,TSh). High counts of Herring Gulls were 9 at the CoR (TK) and 12 at RRR (GBl); for Ring-billed Gulls, 120 (November 2, NH) and 200 (GBl), respectively. Twenty-seven in a field s. of Ames on November 12 were noteworthy (JD). Franklin's Gulls must have moved mainly w. of Iowa: only one was seen in Iowa City (September 18, CN), one in Guthrie Co. (October 3, GBU), and 2 at George Wyth S.P., Waterloo (October 7, TSt). A molting Bonaparte's Gull on the CoR was 2 months early on August 14 (NH); they were on a more regular schedule October 2-November 5, with a maximum of 20 on November 3 (NH); an IOU convention party saw at least 9 on L. Manawa, October 30; 2 were at RRR in early November (GBl). A Forster's Tern near the Coralville Dam on October 12 was considered a bit late (NH), but then a small flight appeared near Shenandoah on November 9 (IG). Flocks of Caspian Terns reported from Sweet M., September 11 (9, JSc), George Wyth S.P. (28, TSt), RRR (15, GBl) and the new SR (15 through October, WB) were easily outnumbered by the 85 seen over the Mississippi between Bettendorf and Davenport on September 13 (PP). The only place where Black Terns caught the fancy of observers was Cone M. in early August (maximum of 40+, B. and C. Knight fide MN).

Cuckoos through Flycatchers. As usual, both cuckoos had departure dates in September (*Yellow-billed; September 22, PP) *Black-billed, September 21, PP), both banded. A few *Short-eared Owls were seen: 2 in October (12th, 28th) at St. Lucas (JSc) and 2 in November (6th, Story Co., HZ; 26th, near Cherokee, DB). Three Long-eared Owls were flushed from a stand of evergreens by the CoR on November 12 (TK). Petersen banded 7 Saw-whet Owls October 6-November 6; one was found roosting near the CoR on November 26 (MN et al.). The migration of *Com. Nighthawks at St. Lucas was called poor (JSc), but scores flew over Iowa City in 2 waves (September 1, 18, NH); the last was seen there on October 14 (TSh), the day before the last Chimney Swift was recorded. Ruby-throated Hummingbirds were much fewer in HHP this fall than in the fall of 1976; one with a stubborn death wish stayed at a Waterloo feeder until November 27, for a new Iowa record (TSt): when subzero weather set in, it became so weak it had to be fed from a pipette. The northeast continues to be the best area for Pileated Woodpeckers in the state: Koenig found 9 in Allamakee Co. on November 29. Several observers were struck by the massive (in many places complete) exodus of *Red-headed Woodpeckers early this fall. A poor acorn crop was blamed, and Christmas censuses are awaited with interest. Petersen's banding records will give a sampling of the flycatcher migration: E. Phoebe, 14, August 25-November 2; Yellow-bellied Flycatcher, 45, August 14-September 26; Acadian, 7, August 14-September 10; "Trail's", 26, August 14-September 6; Least, 56, August 14-September 26 (note the early start). The last E. Pewee noted was one in the Macbride Field Campus, October 2 (NH).

Larks through Shrikes. The roads in Cherokee Co. on November 26 were overrun by 5000 Horned Larks (DB). Thousand of Tree Swallows spent much of the fall near the CoR (TK,MN); a flock of 150 over the water on November 3 was surprisingly large for the late date (NH). The usual roosts of Am. Crows which aggregate as winter approaches were not seen in the Iowa City vicinity (this is not a complaint). Only 10 *Tufted Titmice were found during the period (RD). This has been a good fall for Red-breasted Nuthatches; they appeared early (September 3, TSh); 12 were banded September 5-November 12 (PP); they were common in the northeast (JSc); 8 were counted on October 2 (MN); and Woody Brown knew of 8 in Des Moines at the end of the period. Petersen banded 21 Brown Creepers September 21-November 3, and 10 Winter Wrens between September 21 and October 16. Single Winter Wrens were seen in Iowa City by several people around mid-October. The only report of a Bewick's Wren came from Waterloo (September 28, TSt). The cold winter of 1976-77 must have damaged the population of Carolina Wrens: most reports were negative, even from places where survivors were seen and heard into the summer. Marsh and Sedge Wrens (especially the latter) were common in Davenport (PP), but Marsh Wrens were hard to find at the CoR and at Cone M. A Sedge Wren seen on November 15 (G. Armstrong fide WB) was very late. So was a Gray Catbird on November 4, a Wood Thrush on October 24, and the last of 101 Swainson's Thrushes banded on November 6 (PP). On the other hand, a Gray-cheeked Thrush at Meyer L. on August 14 was early (JSc). Tom Kent found E. Bluebirds regular from September 16 to November 27; in early October, flocks of 12, 20 and 23, respectively, were noted at RRR (GBI); there were also good numbers in n.e. Polk Co. (DM). Blue-gray Gnatcatchers, unusual in fall, were at HHP until September 11 (RD,NH,TK). All signs point to considerable mortality due to the severe winter among Golden-crowned Kinglets: only 20 banded (PP), and few seen by regulars in the field. A Ruby-crowned Kinglet on August 24 was early (PP). The only report of Water Pipits came from St. Lucas, where up to 10 were seen in the fields October 22-November 5 (JSc). Cedar Waxwings, over 100 at their peak (TK), roamed the Iowa City area September 4-November 5. A shrike sp., presumed a Northern, was seen on November 19 near Clear L. (CK); another, identified as a Northern, was early on October 25 at St. Lucas (JSc); a third was reported from LaPorte City (November 12, TSt). The news about *Loggerhead Shrikes was skimpy: considered down in Guthrie Co. (GBu), a pair nested into August at Waterloo (TSt), 3 were seen s.e. of Iowa City on August 5 (RD), and one or 2 were regular by the Little Sioux River (DB).

Vireos, Warblers. It seems that White-eyed Vireos nested successfully in HHP: 2 singing adults were in evidence, along with an immature, until September 24 (RD,NH,TK). One was seen at Sweet M. (August 6) and another at Union Grove S.P. (September 6) (TSt). The last of HHP's 4 singing *Bell's Vireos fell silent or departed after August 28 (TK,MN), while one remained until September 7 at Coon Rapids (GBu). Thirty-eight Solitary Vireos banded August 24-October 12 (PP) were above average. The migration of Red-eyed Vireos (109 banded August 15-September 24) was heaviest in late August (PP). Philadelphia Vireos moved through early (starting August 14, PP) and in waves: 5 on September 11 at HHP (TK), and 12 between September 3 and 14, with 6 on the 10th and 4 on the 14th in Schaufenbuel's territory. A Black-and-white Warbler on August 14 was early (PP). Golden-winged Warblers, unusual in the fall, were reported: singles in HHP August 30-September 5 (RD,TK), 2 in St. Lucas, September 1 and 5 (JSc), one to 3 daily August 14-31 at George Wyth S.P. (TSt), and 4 banded August 20-27 (PP). A Tennessee Warbler at Cardinal M. on August 10 (JSc) was ahead of hoi polloi; on the other hand, a Nashville Warbler near the CoR on November 6 had fallen behind (RD). A total of 5 N. Parula Warblers (August 17-September 25, RD,PP,JSc) was a

good count for fall. The silence about * Yellow Warblers is once again ominous. The migration of Magnolia Warblers peaked in August (PP). Cape May Warblers, rare in the fall, were seen at Cardinal M., August 11, and St. Lucas, September 5 (JSc); the one netted on September 28 was the first since 1972 (PP). Yellow-rumped Warblers banded were few (PP), but many were seen in the field, and some lingered at feeders into mid-November (IG,WD). A Black-throated Green banded on August 24 was early; 15 Blackburnians netted, all before August 29, were numerous (PP). Chestnut-sided arrived early (August 11, JSc) August 13, PP), and peaked in late August, as did Bay-breasted (peak: August 23) (PP). The only Pine Warbler was at HHP on August 29 (NH). Prairie Warblers are very rare in Iowa: 2 seen near L. Rathbun on September 5, and well documented, may be the first fall record for the state (GW). A N. Waterthrush at Cone M. on August 6 (MN et al.) was way ahead of schedule. A Connecticut Warbler was seen near Coon Rapids on September 3 (GBu). Three Mourning Warblers were netted (August 29-September 20, PP), and one was seen at HHP September 5 and 10 (NH et al., TK). A Yellow-breasted Chat was found there on August 11 (MN); another created some excitement in Des Moines, where it is rare, on September 19 (WB). A Wilson's Warbler in Iowa City on August 8 was surprisingly early (TSh). Canada Warblers were banded August 4-September 20, with a zenith in late August (PP).

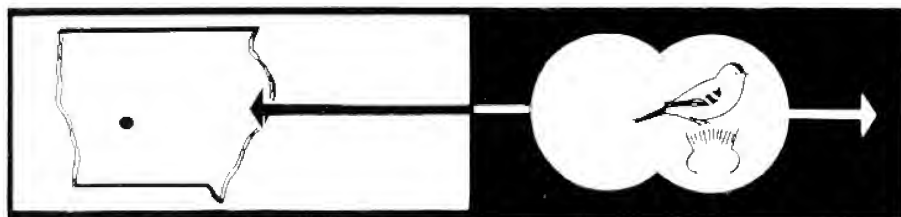
Blackbirds through Sparrows. Seven Yellow-headed Blackbirds were seen at Amana L. on August 7 (NH). The last Rose-breasted Grosbeak and Indigo Bunting were recorded on October 2 (TSh). Gladys Black recieved 61 reports of Evening Grosbeaks from 39 counties, from late October through November. The largest flock was comprised of some 30 birds, and none of them settled down for more than a week. Purple Finches, apparently also on the move, first showed up on September 25 (NH). They were numerous all fall in the northeast (DK,JSc), but only one was at Petersen's feeder (November 27). Three Com. Redpolls were seen: one at the feeder on November 24 (PP), and 2 at Harpers Ferry, November 26 (DK). Pine Siskins were widespread, appearing in early October; they were numerous in the territory covered by Koenig and Schaufenbuel; 30-40 were steady at the feeder (PP); and 300-400 were seen n. of Cherokee in late November (DB). Red Crossbills made only a token appearance (1 at Harpers Ferry, November 26, DK; 5 at Davenport, November 27, PP), but White-winged Crossbills were widely encountered, and in fairly good numbers: on November 19, 25 in Decorah (fide GBI) and 10 at Davenport (PP); 15 at Inwood, Lyon Co., on November 10 (fide GBI); 8 at Waterloo, November 27 (TSt); from November 18 on, but gradually declining in numbers (JSc); 15+ at Iowa City, November 22-23 (TK,NH); and 35+ n. of Cherokee, November 26 (DB). Pine Grosbeaks, seldom seen in Iowa, occurred in the northeast (14 at YRF, 1 at Harpers Ferry, November 26, DK,JSc). Tom Kent carefully monitored the sparrow migration around Iowa City, and found a * Grasshopper Sparrow on the new late date of October 29, 2 * Vesper Sparrows on October 22, at least 10 Harris' Sparrows October 16-November 13, and a rather early White-throated Sparrow on September 10. Lapland Longspurs were first seen on October 2 and common later in the month; one November 24, a flock of 100 birds was found (Sc); one in Cherokee Co., on November 26, numbered 50 individuals (DB). A flock of Snow Buntings by the CoR was first seen on October 29; it grew steadily, to a maximum of 125+ birds on November 26 (TK et al.); on October 23, 20+ were present at Lock 13 (PP); there were many flocks in the northeast (DK); and Cherokee Co. ran away with numerical honors (1000-1500 on November 26, DB). In summary, a good fall for winter finches - QED.

Erratum. The breeding Black-and-white Warbler reported for June 7, 1977 in Fremont Co. was actually seen there several years ago.

Contributors. Dick Bierman, Cherokee; Gladys Black, Pleasantville; Marion

Brewer, Cherokee; Woodward Brown, Des Moines; Gene Burns, Jamaica; George Crossley, Dubuque; Rich DeCoster, Iowa City; James Dinsmore, Ames; William Duval, Muscatine; Ione Gelscher, Hamburg; Marilyn Glasson, Ames; Nicholas Halmi, Iowa City; Bruce Hitman, Brooklyn Park, Minn.; Rick Hollis, Iowa City; Thomas Kent, Iowa City; Darwin Koenig, Decorah; Charles Krieger, Marshalltown; Richard Mooney, Des Moines; Mike and Carol Newlon, Iowa City; Thomas Nigus, Ames; Peter Petersen, Davenport; Ruth Phipps, Shenandoah; Joe Schaufenbuel, St. Lucas; Thomas Shires, Iowa City; Ross Silcock, Malvern; Tom Stone, Waterloo; Jon Stravers, Pella; Gary Wymore, Ottumwa; Hank and Linda Zaletel, Ames. N. S. HALMI, RR 6, Iowa City, Ia. 52240.

WINTER REPORTS FOR I.B.L. are due by February 15. Please send any significant observations for the period February 15-28, intended for publication in *Am. Birds*, by March 5 (their Winter Season encompasses all of February). N.H.



GENE BURNS
JAMAICA, IOWA

On Sunday, September 4, 1977, my wife and I left Jamaica early in the morning and drove to the Sac County line north of Carroll in preparation to making a circle tour of Sac, Ida, Cherokee and Buena Vista counties to check on the birding areas. Our one day trip netted us 57 species in some very good birding territory, plus a new experience with Common Screech Owls, and a "lifer" for our list.

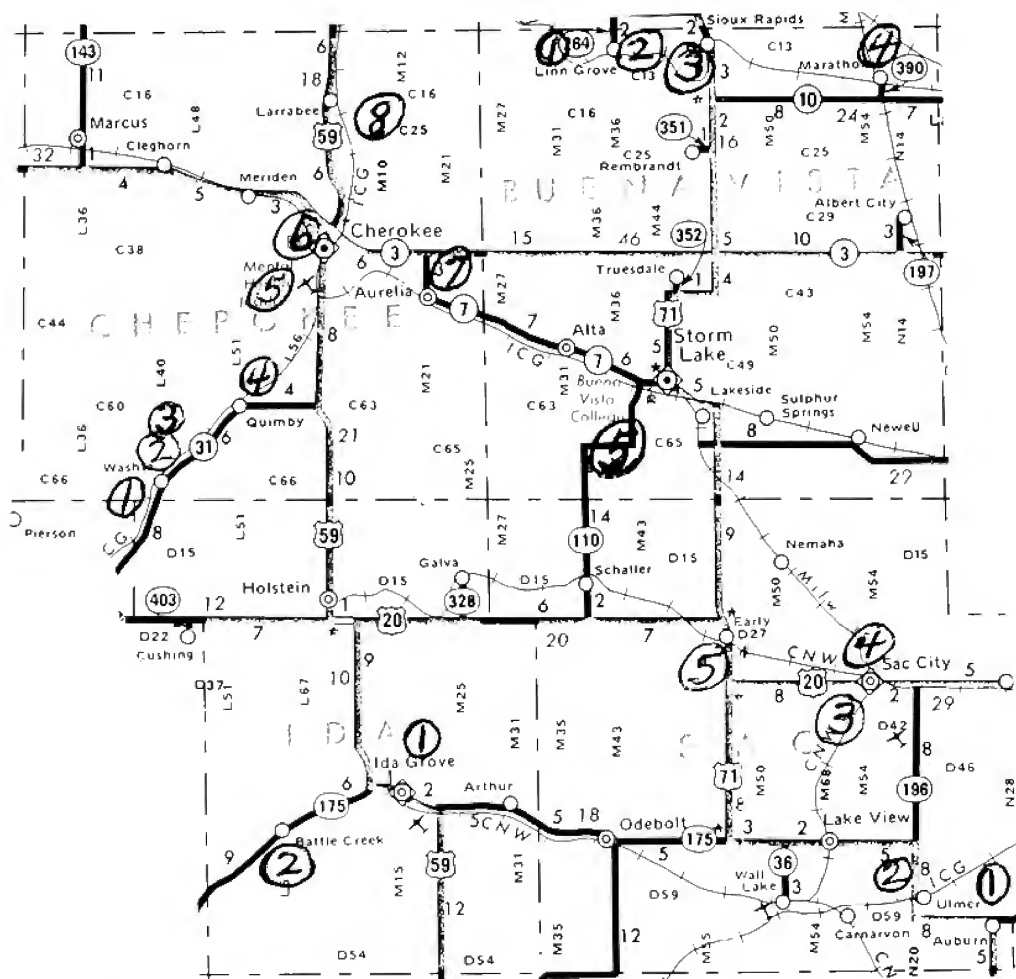
A few species and their numbers observed were as follows: Great Blue Heron 31, Cooper's Hawk 1, Red-tailed Hawk 8, American Kestrel 10, Common Screech Owl 1, Red-headed Woodpecker 46, Hairy Woodpecker 3, Common Crow 75, Black-and-white Warbler 1, Connecticut Warbler 1, Canada Warbler 1, Vesper Sparrow 3, plus the many other species observed during our trip, but most of all to us, the greatest part of the day was when we added a "lifer" to our list, a Gray Partridge. We checked a total of 20 areas and they are listed below with a few of the species you can expect to see (in season) at some of the places. I shall mention the size and facilities when known.

Sac County

(1) **Grant Park** -- One mile north of Auburn, 98 acres, all facilities. This is an excellent area for birding with a nice sized stream, a small pond, good tree area and many thickets. We found Green Heron, Red-eyed Vireo and Connecticut Warbler.

(2) **Blackhawk Lake** -- South edge of Lake View with all facilities. Good birding area at northwest edge of lake with Great Blue Heron, shorebirds and swallows.

(3) **Hagge Park** -- One and one-half miles south of Sac City, 85 acres, all facilities and lots of hardwood trees.



(4) Lubeck Forest -- One-half mile north of Sac City, no facilities.

(5) Reiff Park and Wildlife Area -- One and one-half miles south of Early, 80 acres, all facilities, good for grassland birds. Much open area, many small pine trees at west edge of this area.

Ida County

(1) Moorehead Pioneer Park -- One-half mile north of Ida Grove, 260 acres, all facilities except electricity. Very good birding area, has good tree area, bushes, thickets, pond and stream producing Cooper's Hawk, Philadelphia Vireo and Canada Warbler.

(2) Crawford Creek -- Two miles south of Battlecreek, 288 acres, no facilities, undeveloped.

Cherokee County

(1) Ranney Knob Area -- One-half mile southwest of Washta, 86 acres, all facilities, except electricity, a very good area.

(2) Riits Access -- North edge of Washta, 9 acres, no water or electricity.

(3) Stieneke Access -- Three miles northeast of Washta, 16 acres, all facilities except electricity.

(4) **Pearse-Little Sioux Access** -- Two miles northeast of Quimby, 14 acres, no electricity or water.

(5) **Silver Sioux Recreation area** -- Six miles southwest of Cherokee, 160 acres, all facilities except electricity and water.

(6) **Springlake Park** -- South part of Cherokee, good area and a nice lake.

(7) **Larson Lake** -- Two and one-half miles northeast of Aurelia, 11 acres, all facilities except electricity, small lake. We saw Gray Partridge just north of this area.

(8) **Martin-Little Sioux Recreation Area** -- Four miles east and $\frac{3}{4}$ mile south of Larabee, 164 acres, all facilities except electricity. Screech Owl, Eastern Pewee.

Buena Vista County

(1) **Buena Vista County Park** -- Four miles west of Linn Grove, 292 acres, all facilities. A very good birding area with Flickers and several Eastern Bluebirds.

(2) **Linn Grove Park** -- In the town of Linn Grove, 18 acres, all facilities. A very fine place to bird. This entire area has a definite charm which you can actually feel when you arrive in the Linn Grove vicinity. It has a beautiful stream and pond area. Make this a "must" on your birding stops if you ever pass through this area. It will definitely be worth your time. We found Green Heron, Belted Kingfisher, Red-tailed Hawk and Eastern Phoebe.

(3) **Gabrielson Park** -- South edge of Sioux Rapids, 28 acres, water, toilets, picnicking. Apparently new area and is being developed with Common Nighthawk, Red-bellied Woodpecker seen.

(4) **Pickeria Lake** -- Four miles northeast of Marathon, with gulls, swallows.

(5) **Storm Lake** -- South edge of the city of Storm Lake, fine birding area with all facilities. Good for herons, gulls and swallows.

Book Reviews

Moments of Discovery: Adventures with American Birds -- photographs by Eliot Porter, text by Micheal Harwood -- E. P. Dutton, New York -- 120 p., 64 color plates -- 1977 -- \$29.95.

This early entry into the 1977 cocktail table sweepstakes is built around Porter's excellent photographs. The $15\frac{1}{4} \times 10\frac{3}{4}$ " size makes it an impossible item to shelve, but the quality of reproduction of the plates and the binding make it worthy of a spot on the table. The subjects of the photographs include many shore and water birds as well as hummingbirds, woodpeckers, flycatchers and warblers. The text traces the development of bird study in America featuring Catesby, Audubon, Wilson, Porter and Peterson. It is a more interesting text than is usually found in books stressing a collection of photographs but the text format is very wasteful of paper. One who really enjoys excellent photographs will certainly appreciate this book especially if price is no object. ed.

As Free as a Bird -- Peter Johnson -- Two Continents, New York -- 208 p., 190 color photographs -- 1977 -- \$25.00.

This book permits us to contrast the work of Porter with that of Peter Johnson of South Africa. Johnson seems to fit into the more modern school of photographer who shows some photographs where the subject is not in totally sharp focus but which convey a sense of the bird's personality. The reproduction is very good and many of the species are similar to North American birds. The text tells a bit of the habits and habitat preference of the species pictured. The use of space is much more efficient than in the Porter book resulting in a more standard sized book and over three times as many color plates for a considerably lower price. ed.

Birds of Prey -- Their Biology and Ecology -- Leslie Brown -- A. & W. Publishers, Inc., New York -- 256 p., 48 color and 50 black-and-white photographs, many line drawings -- 1977 -- \$12.95.

If you are fascinated by the birds of prey and want to learn more about their structure and ecology this book would be an excellent investment. Reasonably priced in this period of inflated costs it combines a good text with excellent illustrations and fine photographs. Brown is one of the world's top authorities on raptors. This book is another in a series of fine works produced in a surprisingly short period. The text covers classification, distribution, habitats, anatomy, structure, way of life, hunting methods, feeding techniques, migration, nomadism, breeding biology, ecology of predation, conservation and protection. The appendices list the living species of falconiforms and give their status and distribution. This is a highly recommended book. ed.

Pigeons and Doves of the World -- Derek Goodwin -- Cornell University Press, Ithaca -- 445 p., 3 color plates, 148 line drawings -- 1977 -- \$27.50.

This second edition of a book originally published by the British Museum makes the title readily available in the U.S. for the first time. The text provides general information on nomenclature, adaptive radiation, coloration, plumage sequence, feeding habits, voice, display, pair formation, nesting, parental care and escape. The species accounts include range maps, line drawings, detailed descriptions and other known life history data. It is the most complete work yet produced on this family. ed.

Encyclopedia of Ethology -- h. c. Bernhard Grzimek, editor-in-chief -- Van Nostrand, Reinhold Co., New York -- 725 p., 250 color plates -- 1977 -- \$39.50.

A companion volume to the **Encyclopedia of Ecology** reviewed in the June issue (I.B.L. Vol. 47 p. 72), this encyclopedia covers current theories and research findings in animal behavior patterns. Starting with a history of the development of ethology as a science the volume examines animal nervous systems and sense organs that provide the physiological basis of behavior. Animal groups are examined that either have been studied in great detail or display high developed forms of a particular behavior. This is the first full-scale examination of research data, theories and issues relating to the science of ethology. As with the other volumes in the series, libraries should seriously consider the purchase of the whole series. ed.

The Bird Man -- Ian Strange -- Gordon and Cremonesi, London -- 182 p., 6 color and 17 black-and-white plates -- 1976 -- \$16.95.

This autobiography of the moving force behind the preservation of wildlife on the Falkland Islands in the South Atlantic could easily be subtitled the "Natural History of the Falklands". Strange is a good painter and photographer as well as being a keen observer of wildlife. Born in England he moved to the Falklands in 1959 and has been protecting their wildlife ever since. He traveled in the U.S. in the 1960's writing articles on the islands and urging preservation for their threatened species. The book combines the story of Ian's crusade with a graphic picture of the wildlife of the island. ed.

Birds in Japan -- A Field Guide -- Yoshimaro Yamashina -- Tokyo News Service, Ltd., Kosoku Doro Bldg., 10 Ginza Nishi 8 - chue-ku, Tokyo, Japan -- 266 p., 132 color illustrations, many black-and-white photographs -- revised second edition, 1974 -- \$29.50.

This first edition of this book, published in 1961, was the first book on the birds of Japan to appear in English. This revised edition updates the previous publication and provides an authoritative work for visiting birders. Not all the species found in Japan are covered in detail but a complete list is included. Species omitted include the rare birds and some of those common in Europe or America

which are well described in other guides. The species accounts include information on recognition, history, geography and climate of Japan as well as the distribution and migration of birds in Japan. A twenty-two page section, well illustrated with photographs, suggests good areas for bird watching trips. The book is printed on good quality paper, is well bound and of a convenient field guide size. It is certainly indispensable for the birder visiting Japan. It can be ordered directly from the publisher with a U.S. check postpaid. ed.

Birds of Nepal with Reference to Kashmir and Sikkim -- Robert L. Fleming Sr. and Jr. and Lain Singh Bangdel -- Published by the Felming's and available from Mrs. Sally Beiler, 1028 Crestwood, Wenatchee, Washington 98801 -- 349 p., 150 color plates and 3 maps -- 1976 -- \$14.00 postpaid.

Anyone contemplating a trip to a central Asian area will do well to acquire this fine guide. The color plates depict over 1000 individuals representing 741 species. Several artists were involved and there is some variation in the quality of the paintings. Most of the passerines seem very well done and are shown in reasonably large scale. The text is on the page opposite the plates as in the Robbins North American Guide. The species accounts include English and Latin names, elevation in meters and feet, length in centimeters and inches, seasonal status, abundance, comments on habitats, habits and field marks, voice and finally distribution. An introduction describes the geography of the country and covers zoogeographical considerations, bird watching tips and how use the book. A bibliography, list of additional species for Kashmir and Sikkim with text only and indexes of scientific and common names are included. The book is field guide size and is well designed for field use. The result of 25 years of field work in the country this book is highly recommended. ed.

Birds of New Guinea and Tropical Australia -- William S. Peckover and L.W.C. Filewood -- A. H. and A. W. Reed, dist. in the U.S. by Charles E. Tuttle Co., Rutland, Vt. -- 160 p., 117 color photographs -- 96 maps -- 1976 -- \$25.50.

This tropical area is rich in spectacular bird life with over 850 species. The authors have obtained a series of fine photo cell shots of a good cross-section of this avifauna much as Dunning has done for South America. The text presents a thumb-nail life history of the birds pictured. All the species of the region, Papua New Guinea, Irian Jaya and the Solomon Islands are listed with distribution, migration and breeding habits. Those who enjoy fine photography or wish to learn more of tropical species will enjoy this beautiful book. ed.

Manual of Neotropical Birds, Vol. 1 -- Emmet R. Blake -- University of Chicago Press, Chicago -- 704 p., 12 plates (4 in color), 67 black-and-white drawings -- 1977 -- \$50.00.

The first volume of the long awaited work on the birds of Central and South America is now in print. The four volumes will cover 3300 species with 600 included in this volume, penguins through gulls. The manual coverage excludes Mexico, the West Indies, the Galapagos and Falkland Islands. The series will update the earlier works of Hellmayr, Cory and Conover and in a large part Ridgway and Friedmann. Species headings include common and scientific names, general appearance, distinctive attributes, habitat, measurements, plumages, sexual dimorphism and seasonal variation when noteworthy. Distribution is indicated by range maps. Over one third of the species are illustrated. When complete in a projected nine years this will be the definitive work on the birds of the American tropics. ed.

A Birder's Guide to Southern California -- James A. Lane -- L & P Press, Box 19401, Denver, Colorado 80219 -- 140 p., many maps, black-and-white photographs and charts -- 1976 -- paperback -- \$4.50.

This is the second revision of a book first published in 1968. The format is similar to Lane's other guides (I.B.L. 43 p. 81). The bulk of the text describes birding trips or loops of one-half to two days duration including maps and a detailed series of directions to the best birding spots. Also included is pelagic trip information, miscellaneous area coverage, a species list of specialties and where to find them, a chart of habitats, seasonal occurrence and abundance, rare and accidental birds, the mammals, amphibians, and reptiles of the area, references and an index of species and localities. Having used Lane's books in other areas it is difficult to imagine a birder trying to work without this book on a trip to Southern California. This is a must for any serious birder traveling in this area. ed.

The World of Roger Tory Peterson -- John C. Devlin and Grace Naismith -- Times Books, New York -- 266 p., 15 color plates and 12 pages of black-and-white photographs, many line drawings -- 1977 -- \$14.95.

If non-birders have heard of one bird watcher it is probably Roger Tory Peterson. His field guides made it possible to easily identify almost all birds in the field and have sold over 8 million copies to date. As a nature artist he is world-renown. Now there is a biography tracing his life through his rise to perhaps the world's number one bird man. The book tells the story of his life with each of his three wives, the various roadblocks along his path to success and provides many examples of a cross-section of his work. It is clear the authors are not birders as some errors in bird names crept into the text, for example: Blue Jay as one word and Yellowthroat as two. Another obvious error refers to the complete revision of the eastern guide in 1961, this was the revision of the western guide. If you have ever had the desire to learn more about this man than a dust jacket blurb or an occasional interview reveals this book is for you. ed.

The Audubon Society Field Guide to North American Birds -- Western Region - M. D. F. Udvardy -- Alfred A. Knopf, New York -- 855 p., 627 color photographs, many line drawings, one map -- 1977 -- \$7.95.

In the last I.B.L. Vol 47 p. 112-13, we reviewed the eastern edition of this guide. Most of those remarks apply to this book also. It is eighty pages longer and has forty-three more photographs. One point which is worth repeating is that of the placement of the text in a habitat sequence. The introduction says "we have considered the primary habitat of a species the one where most observers encounter it -- even if this is not its breeding habitat." Keeping this in mind one is surprised to find the habitat where most observers in the west find Least and Semipalmated Sandpipers is wet tundra. How many birders even see the wet tundra on Shorebird trips?

Since one cannot objectively judge a book as a beginner when they are an experienced birder I let some of my adult ornithology students use the book and report their response. The result was that they all felt it was quite practical for field use by a beginner and roughly equal to the "standard" guides. This would indicate that this concept in field guides is worth giving a try. Both guides are worth the price for the photographs alone. ed.

S. L. R. Photography -- Derek Watkins -- David and Charles, Inc., North Pomfret, Vt. -- 128 p., 50 black-and-white photographs, many drawings, charts and tables -- 1976 -- \$10.95.

More and more birders are becoming photographers and the most popular camera for bird photography is the single lens reflex. While it does not deal with nature photography this book provides a very balanced background on the use of this type of camera. The author covers cameras, lenses, filters and how to use them, picture making with tips on how to treat various subjects and finally techniques such as the use of the exposure meter, choice of films, color and

printing. The book is based on the practical experience of a professional amateur. ed.

A Bird Watcher's Adventures in Tropical America -- Alexander F. Skutch -- University of Texas Press, Austin -- 327 p., many line drawings, 5 maps -- 1977 -- \$13.95.

Skutch has already produced a great volume of meticulous observations of previously little-known tropical birds. Most of this was not presented as colorful narrative but this volume does fill this description. Dealing with his travels in tropical Americas wild areas primarily in the 1930's and early 1940's the book is quite readable and enjoyable. It covers trips in southern Mexico, high Guatemalan mountains, eastern Ecuador, Peru and Venezuela. Birds dealt with include the Troupial--an oriole, hummingbirds, cotingas and woodcreepers. Also highlighted are interactions between birds and ants, the Cecropia tree and its animal residents and the dawn songs of tropical America. For good, enjoyable reading and arm chair traveling this book will certainly fill the bill on long and cold Iowa winter nights. ed.

Water Birds of California -- Howard L. Cogswell -- University of California Press, Berkeley -- 399 p., 12 color plates, many line drawings, one map -- 1977 -- paperbound -- \$5.75.

This book is one of a series of California natural history guides, the first dealing with birds. The identification system begins with three picture keys showing the birds on water, land and in flight. Your choice of the correct family leads you to the text with the many line drawings. For each species the text provides a verbal description, habits, range, and occurrence in California. The color plates depict birds which are not easily identified by reference to line drawings. Several ducks have large heads and are a bit off scale but for the most part Gene Chrestman's work is adequate. A long section, 92 pages, present graphic calendars or migration charts along with a habitat distribution for the water birds. Shorter sections give some general birding tips, cover banding, conservation and hunting, describe generally the behavior patterns and list organizations and references. ed.

The Courtship of Birds -- Hilda Simon -- Dodd, Mead and Co., New York -- 190 p., 59 color illustrations -- 1977 -- \$12.95.

Birds have evolved many variations in their courtship rituals and the author describes some of the most unique in word and picture. She divides the coverage into chapters dealing with patterns of courtship behavior, plumage vaiations, display acrobatics, wooing by work and mutual courthship. The illustrations are well done and the text, while not avoiding anthropomorphism, is accurage. ed.

Wildlife Watcher's Handbook -- Frank T. Hanenkrat -- Winchester Press, New York -- 241 p., many black-and-white photographs -- 1977 -- \$10.00.

The books is subtitled "how hunters, birders, naturalists and photographers can get close to wild animals and birds." It contains many tips that can make your birding more productive. For example the section on optical aids covers binoculars in the usual general ways, lens system, magnification, eyepieces, coating, field of view, focusing, weight and then goes into some specific price information and list of suppliers not usually included. Other topics covered include stalking, physical conditioning, dangers in the wild, getting birds and mammals to come to you, blinds, photography, navigation and tracking. It is well written and a very useful book for anyone who enjoys the outdoors. ed.

RED-SHOULDERED HAWK REPORTS

We would like to acknowledge the many Iowa birders who have sent in field reports of the Red-shouldered Hawk which are helping us to determine the status of this endangered species. However, this task is far from completed and we are asking the continued cooperation of all field observers. Information on all sightings of this species are requested, especially locations of wintering individuals or courting pairs. If you record any Red-shouldered Hawk activity in your area, please contact us: Jim Bednarz or Jim Dinsmore, Dept. of Animal Ecology, 124 Sciences II, Iowa State University, Ames, Iowa 50011. Please include with all field reports: Date of sighting, exact location, activity of hawk(s), your name, address and phone number. Thank for your cooperation.

DOCUMENTATION

The following is a list of birds from the I.O.U. Checklist for which a documentation form like that on the back cover of this issue should be submitted if they are observed and reported for publication in Field Reports of IBL and-or the Changing Seasons feature of *American Birds*. All species new to the Iowa list must, of course, be at least as well documented. Whenever possible, photographic evidence should be obtained and submitted. Most of the species listed are accidental, casual or rare in Iowa, or uncommon ones that are hard to distinguish from others. Similar documentation is also needed for birds that may be abundant in season but are rare out of season (for example, Spotted Sandpiper, Lark Sparrow or Chipping Sparrow in winter).

N. S. Halmi, Field Reports Editor

Arctic Loon, Red-throated Loon, Red-necked Grebe, Brown Pelican, American Anhinga, Magnificent Frigatebird, imm. Night Herons, Wood Stork, Glossy Ibis, White-faced Ibis, Roseate Spoonbill, Black-bellied Whistling-Duck, Fulvous Whistling-Duck, Trumpeter Swan, Ross' Goose, Eurasian Wigeon, Greater Scaup, Common Eider, King Eider, Harlequin Duck, Oldsquaw, all Scoters, Black Vulture, non-migrant Osprey, Swallow-tailed Kite, Mississippi Kite, Northern Goshawk, Harris' Hawk, Swainson's Hawk, Ferruginous Hawk, Golden Eagle, Gyrfalcon, Prairie Falcon, Peregrine Falcon, Merlin, Greater Prairie Chicken, Sharp-tailed Grouse, Whooping Crane, Yellow Rail, Black Rail, Purple Gallinule, Black-necked Stilt, Mountain Plover, Eskimo Curlew, Long-billed Curlew, Red Phalarope, Red Knot, Sharp-tailed Sandpiper, Purple Sandpiper, Ruff, Parasitic Jaeger, Long-tailed Jaeger, Iceland Gull, Greater Black-backed Gull, Ivory Gull, Black-legged Kittiwake, Sabine's Gull, Thick-billed Murre, Band-tailed Pigeon, Smooth-billed Ani, Groove-billed Ani, Barn Owl, Great Gray Owl, Chuck-will's-widow, Poor-will, Lewis' Woodpecker, Black-backed Three-toed Woodpecker, Northern Three-toed Woodpecker, Western Kingbird (E.) Scissor-tailed Flycatcher, Say's Phoebe, Gray Jay, Northern Raven, Pinyon Jay, Clark's Nutcracker, Carolina Chickadee, Boreal Chickadee, Brown-headed Nuthatch, Pygmy Nuthatch, North American Dipper, Bewick's Wren, Rock Wren, Varied Thrush, Mountain Bluebird, Townsend's Solitaire, Sprague's Pipit, Northern Shrike, Loggerhead Shrike (winter, N), Worm-eating Warbler, Black-throated Gray Warbler, Townsend's Warbler, Yellow-throated Warbler, Prairie Warbler, MacGillivray's Warbler, Great-tailed Grackle; Western Tanager, Black-headed Grosbeak, Lazuli Bunting, Painted Bunting, Pine Grosbeak, Gray-crowned Rosy Finch, Green-tailed Towhee, Baird's Sparrow, Sharp-tailed Sparrow, Golden-crowned Sparrow, McCown's Longspur, Smith's Longspur, Chestnut-collared Longspur.

BIRDS: VERIFYING DOCUMENTATION
OF AN EXTRAORDINARY SIGHT RECORD

1. Species: 2. Number:
3. Location:
4. Date: 5. Time bird seen: to
6. Description of size, shape and color-pattern (**describe in great detail all parts of the plumage, and beak and feet coloration, in addition, to the diagnostic characteristics, but include only what actually was seen in the field**):
7. Description of voice, if heard:
8. Description of behavior:
9. Habitat - general:
specific:
10. Similarly appearing species which are eliminated by questions 6, 7 & 8, Explain:
11. Distance (how measured)? 12. Optical equipment:
13. Light (sky, light on bird, position of sun in relation to bird and you):
14. Previous experience with this species and similarly appearing species:
15. Other observers:
16. Did the others agree with your identification?
17. Other observers who independently **identified** this bird:
18. Books, illustrations and advice consulted, and how did these influence this description:
19. How long after observing this bird did you first write this description?

Signature Address:
Date: City, State:

If you watch birds solely for your own enjoyment, there really is no need to describe your observations in writing. But, if you have seen something unusual and want to share this experience with others, a written description is essential. It is true your immediate friends who know and respect your ability probably will accept your report without question, but what about those who do not know you, particularly the bird students 100 years from now who cannot know you? Also, what about the habitual skeptics? And most importantly, what about the compilers of regional bird lists who probably will insist that records be scientifically sound? All these critics will investigate your observation not because they assume you are wrong, but merely because they ordinarily expect verification. Whether the individual demanding verification realizes it or not, in doing so, he is employing a basic rule of the scientific method.

If your observation involves a common species during a season of abundance, verification is achieved simply by returning there again in season. If, however, the observation involves a rare species, or a common species out of season, verification is not obtained easily and special documentation is necessary. The best documentation is a collected specimen, and many bird students insist this is the only acceptable evidence. However, others recognize the importance and reliability of sight records accumulated by the experienced field observer, and maintain that even extraordinary sight records are acceptable if accompanied by an adequate verifying description.

It must be emphasized that a request for documentation is not an affront, but an effort to perpetuate a record by obtaining concrete evidence which may be permanently preserved for all to examine. This procedure is required for every extraordinary observation irrespective of the observer.

It should also be pointed out that with the great photographic equipment now available, species identification from photographs is possible. Such species documentations are highly desirable and should be sent to the state editors or to large museums. Vernon Kleen.